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NOVEMBER 1994

BOARDWATCH MAGAZINE

Guide to Electronic Bul... ...he Internet

INTERVIEW:

SYSOP NOEL (PAUL) STOOKEY OF PETER PAUL AND MARY

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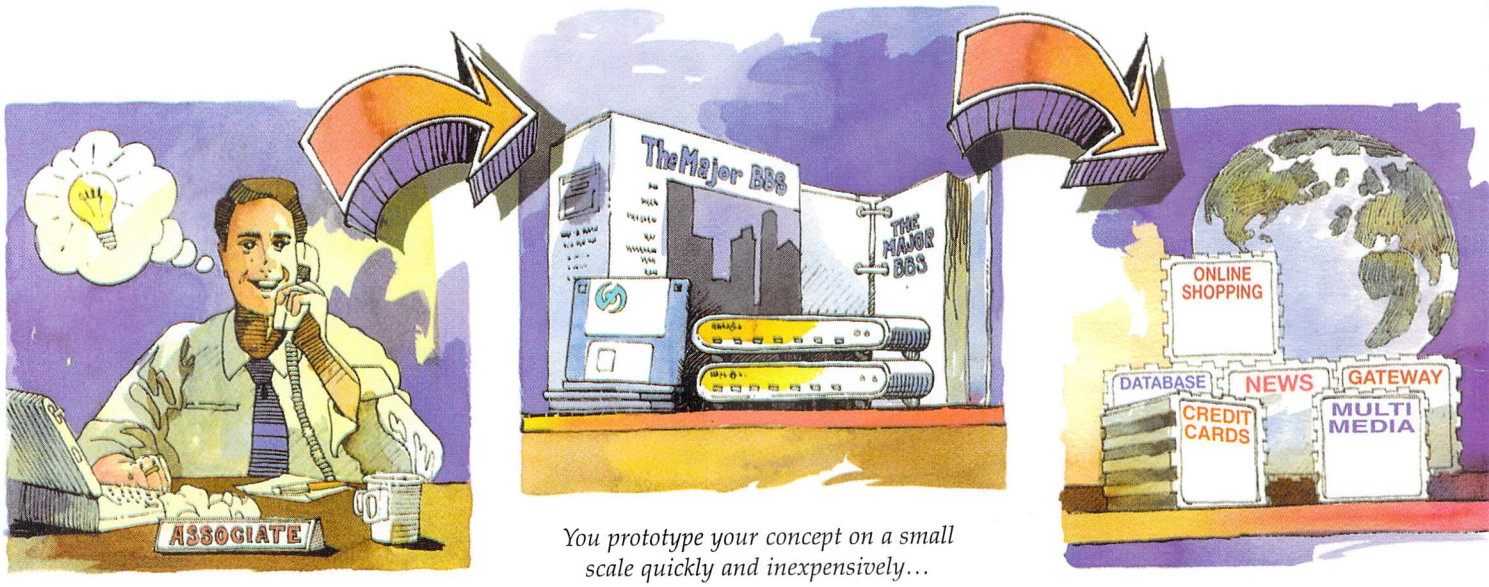

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But that's just the beginning...

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Next, you can integrate a wide array of add-on options. Installation is as easy as "A:INSTALL". The Major BBS takes full advantage of DLL technology to dynamically link these features into your system.

For instance, *Fax/Online* lets you provide outgoing fax-mail and fax database services to your users. *Search and Retrieve* gives you a full document database, with support for graphics files and fax attachments. And Internet mail and newsgroups can pipe right in with the *Major Gateway/Internet* package.

Other DLL extensions available from Galacticomm include *Shopping Mall*, *The Major Database*, *Entertainment Collection*, *Dial-Out*, and a special version of the *RIPaint* GUI design tool.

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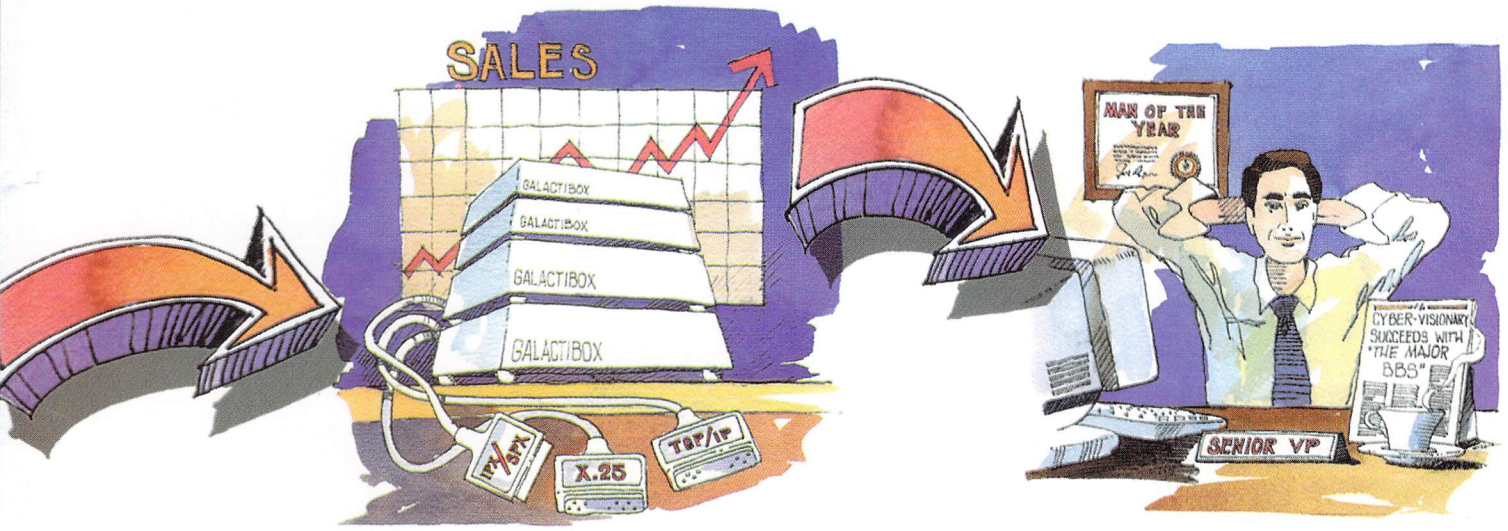
Over 150 independent software vendors offer a wealth of products you can cleanly add to your system as DLLs. Plug in software such as:

- multimedia document servers
- MLS photograph databases
- credit card verifiers
- FIDO, QWK, RIME mail support
- online bidding networks
- employment classifieds
- 1-900 payment and tracking
- interactive multiplayer games
- worldwide "chat" networks
- automatic call-back verifiers
- contact management databases
- alternate user languages
- photograph dating services
- online purchasing systems
- satellite news delivery
- remote management tools
- and much, much more...

Each of these products integrates directly into your system, taking full advantage of our open architecture and

We just provide the tools.



As you grow, you add more lines, hook up your LAN, connect to the Internet...

And you experience the success of your own, unique online service.

multi-user environment. No other BBS platform gives you this power.

"Doors" even let you interface to client/server databases and other DOS applications, as well as the programs written for multinode BBSes.

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> **Only The Major BBS gives you the power to support over 100 simultaneous high-speed users on one Pentium-class machine.**

In performance tests reported by *Boardwatch Magazine*, The Major BBS handled 104 simultaneous file transfers at 14.4 modem rates (1750 cps), and over 64 at 28.8 modem speeds (3300 cps). In most real world cases, even more simultaneous users are possible.

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And our new *Internet Connectivity Option* lets you integrate a TCP/IP stack directly into your BBS. You don't need a separate machine to provide telnet in, telnet out, FTP client, and FTP server features to your users. Anonymous FTP and Internet surcharges are also supported.

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There are few limits to what you can accomplish with The Major BBS. The full C source code to the BBS is available, to give you the ultimate flexibility. Write your own add-on options, or tweak a particular function to your exact needs.

And to address the needs of very high-end applications, Galacticomm has launched a UNIX technology division to provide The Major BBS platform for minicomputers to supercomputers.

Integrated solutions, consulting, and custom development are available from *Ambassador* dealers worldwide. World-class support is available to you via voice, fax, BBS, CompuServe, and the Internet. A quarterly magazine called *The Major News* provides you tips and tricks, as well as a resource for third-party products and services. And regular software improvements bring you the latest in online technology.

For more information, give us a call at 1-800-328-1128 (or 305-583-5990 outside the U.S. and Canada). And let's turn your visions into reality.

GALACTICOMM

November 1994

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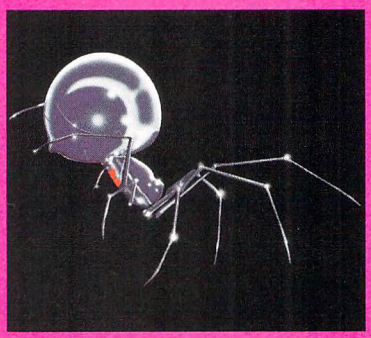

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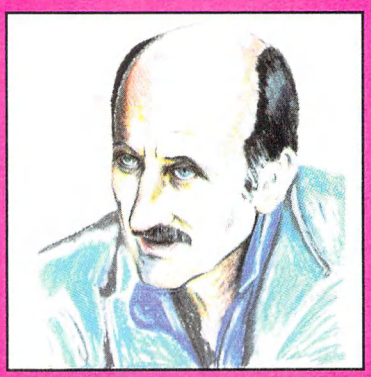

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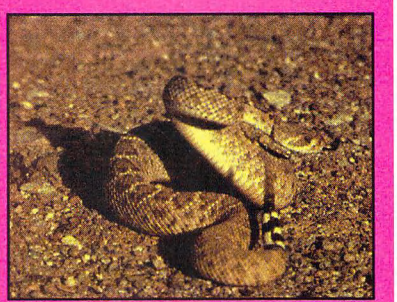

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Editor/Publisher

Jack Rickard

Assistant Editor

Brian Gallagher

Contributing Writers

John C. Dvorak
Jim Warren
Jim Thompson
Lance Rose
Bill Gram-Reefer
Walt Howe
Wendy Murdock
Ric Manning
Charles Moore
Phyllis Phlegar
Dave Tennant
Lenny Bailes
Gordon Cook
Rea Redd
Alan Bryant

Art Director/Cover Design/Art

Charlie Moore

Graphic Design and Production

Jeff Rouyer
Marla Asheim

Subscriptions/Circulation

Rob King
Cathy Youngblood

Technical Operations

Gary Funk
Richard Moreaux

Newsstand Circulation

Martin L. Shafkowitz

Advertising Sales

Roger Mertes
Charlie Moore

Editorial Offices

8500 W. Bowles Ave., Suite 210
Littleton, CO 80123
(303)973-6038 Editorial
(303)973-3731 Fax
(303)973-4222 BBS
(800)933-6038 Subscriptions

Electronic Mail

Internet:
jack.rickard@boardwatch.com
subscriptions@boardwatch.com

FidoNet: **1:104/555**

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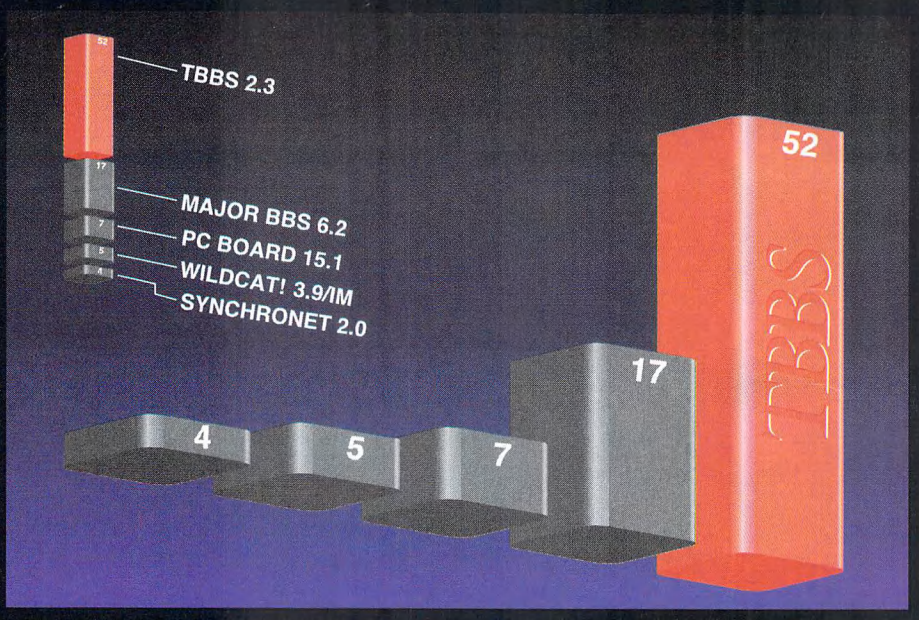
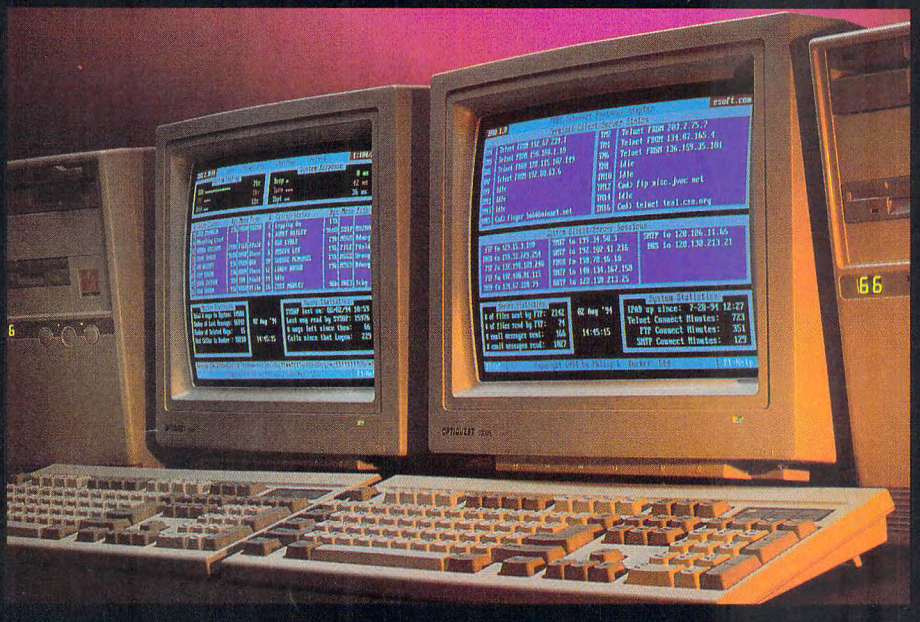
▶ Number of simultaneous, full-speed ZMODEM downloads at 38.4 kbps on a single P5/60 CPU.





▲ The test was conducted in the eSoft Testing Lab. Each PC represents one BBS user.

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EDITOR'S NOTES

OH, WHAT A TANGLED WEB WE WEAVE...

The acceleration of online activity and particularly this Internet connectivity scramble is becoming a thing to behold. This may shape up to be more fun than we can bear. But we have learned a few things that should perhaps be shared.

In this issue, we present Gordon Cook's take on the Commercial Internet Exchange (CIX) meeting held September 14th in Atlanta. Recall from our September issue our report on the attempt by a tiny group of CIX board members to essentially hold the Internet hostage for cash. Although I eschew travel, this did seem to be a key turning point for a lot of things and I did make the trip, attended the CIX reception, visited around a little with Tom Jennings (new CIX member) a bit, and schmoozed around in editor garb. In a word, were it not for the presence of Mr. Jennings and a few other friends encountered, the trip would have been a total crash/burn/bust for yours truly.

The meeting was held at Interop and I did more or less attend that as well briefly. Be still my heart. Never have so many, gathered so uselessly, and without a clue. The booths were manned entirely by sales geeks who knew nothing but were ever ready to "mail you something." CompuServe had a large booth with a sign directing you to "ask about Internet connections." I did. They said they'd mail me something. I probably hit nine or ten interesting displays, always with the same answer - we'll mail it to you. They could have held the show by mail as best as I can tell. Everyone there was clearly disinterested in being there, and doing it as part of their job I guess. It was depressing. MCI was present, with a beautifully designed booth, but no mention of Internet. Very strange.

The CIX soiree was an embarrassment for all who attended. As we thought, the CIX board is out of control, entirely unaccountable to the membership of the organization, who are basically leaderless and without an information channel. A counter group led by Karl Denninger attempted to mount some sort of organization, but failed in such areas as finding a room to rent for a meeting or hospitality suite. The CIX board, or basically Little Marty and Little Ricky, found the basic CONCEPT of a meeting terribly inconvenient this year. After RSVPing numerous attendees from the membership, they announced about a week before the event that only ONE representative from each member organization would actually be allowed in the meeting, expressed a caution that there might not be a quorum and the meeting would then of course be cancelled, and just generally did everything in their power not to have a meeting at all. The one they did have was by all accounts mostly embarrassing for everyone there.

Bill Washburn, the Executive Director of CIX did pretty much insist on a more open reception the night before in a tiny, dimly lit room under some stairs. He also resigned his position at the actual CIX meeting and has taken a job with MecklerWeb. He has been most gracious in trying to paint it all in a positive light, and truly does seem to believe in the concept of the organization and was very concerned for the many members he has worked with. But it was plain there was no way to work with Little Marty and Little Ricky toward any good end, and he was out of there. We were sufficiently impressed with him to ask him to join the ONE BBSCON executive advisory board.

A couple of notable items. First, the CIX membership fee has been lowered to $7500 for 1995. Second, the route filtering threat has been tabled until next March, and effectively defanged permanently we suspect. You can be on the Internet without Little Marty and Little Ricky's permission, and no you don't have to pay them cash to be there. And finally, the CIX membership was inclined to believe that filtering wouldn't have any effect anyway, and were busy making plans to connect to each other directly. The threatened action DID have a curious effect in that a number of organizations joined CIX in the past few months, swelling their ranks from fifty some-odd systems to over eighty. This panic was just over the THREAT of not somehow being connected - even if they weren't sure that could be done. Some might theorize that tabling it until March was a ploy to keep the recruiting ball in the air a few more months before publicly demonstrating the toothlessness of the tiger.

One of the questions that did come up was what happens to all that membership money. Virtually all of it goes to PSI, Marty Schoffstall's company coincidentally, to operate the CIX routers. No elegance there either. "You hold their arms while I empty their pockets."

This entire situation cries out to be the political battle of the decade. We were disappointed to learn that virtually NONE of the participants knew the mechanics of making it into one - the lost trying to manipulate the leaderless. The bottom line is the CIX became most publicly and embarrassingly irrelevant, and they couldn't even muster a good heated argument in the process.

The timing of all this is a bit unfortunate. The thing the CIX had actually established was the concept of peer networks connecting without settlements. While this may seem obvious, it was actually historic, and broke the back of the conundrum that had held all online services in the shackles of isolation for nearly twenty years - who pays who for traffic. The answer seems simple enough - nobody. But it still causes brows to furrow and heads to scratch in contemplating the religious implications of such heresy - even after it demonstrably works. It is crucial to retain this concept and if the entire battle moves to Sprint, MCI, and perhaps a few others, the issue of settlements and peerage could come up again. We hope not. But with CIX basically self-nominating themselves as irrelevant and indeed suspect as community leaders, the door is open to having a whole LOT of little Internets not particularly connected to each other, and that's no Internet at all.

In the face of this, the ongoing theme of concern to most existing Internet providers is their deeply held fear that their customers are going to become their competitors. They are virtually irrational about this topic. Not only the Netcom's and UUNET's, but now ANS is trying to get out of contracts they have with providers, because they want the business all to themselves. The legions of people wanting to corner the market on the Internet are just awe inspiring.

It is clear that my entire view of the economics and dynamics of Internet

connectivity are seriously hosed. I see Mosaic, WINSOCK and other Internet applications moving at nearly lightspeed from being quirky experimentals, to application programs, and now right into the operating systems themselves. TCP/IP, Winsock, and Mosaic will be an integral part of Windows, OS/2, and every other operating system that wants to be one in less than a year. The claims for the number of people actually ON the Internet have become preposterous. There are a little over 3 million hosts on the Internet and that actually works out, if you're generous, to maybe 4-5 million people with IP connectivity. Not twenty million. Not thirty million. If you count everyone that could send an e-mail message via the Internet, you get to twenty million worldwide pretty easily. But that has somehow gotten translated in an almost comically ridiculous fashion to "20 million plus on the Internet." The problem with the misunderstanding is that there ARE going to be at least 10 million people, who have NEVER had the FIRST IP connection, who DO want to make it in the next year. The only affordable way for them to make that connection is with a reasonably priced 28.8 kbps SLIP connection. ISDN may be a player at some point as well. And who is going to provide it? And who is going to explain it? And who is going to provide customer support for it?

I view the current bevy of Internet Service Providers such as Netcom, Colorado Supernet, et. al., as a bunch of kids at the beach with sand pails. While we describe the tsunami approaching, their ENTIRE focus and the only question they want to talk about is whether or not their little sand pail gets full of seawater. They don't want to discuss anything else. Discussions of tools, market demand, operating system enhancements, larger connectivity issues, and particularly customer support issues, fall on deaf ears. So my reply is this: it is QUITE true that the tsunami is only about six inches tall out there at sea, and it is also true that it is moving at 450 mph so yes, you don't want to miss it. And ultimately, yes, your little pail WILL in fact be technically QUITE full here in just a bit. Stand here at the waters edge and hold your pail JUST SO....meanwhile, I have to step inland for a few days rest on some higher ground. I'll be back to check on your progress, after the tsunamis, to make sure your pails were adequately filled to your satisfaction, and perhaps to retrieving your drying white carcasses from the treetops... Comically, a few are listening a bit, nodding their heads maybe, and then hedging their bets by bringing TWO sand pails to the waters edge.

Sprint is very close to stealing the whole show by selling T1 connections to anyone with a clue - no restrictions on resale. Kevin Behrens of Aquila BBS in Chicago is pretty happy with that situation (telnet aquila.com). The last time we were in San Francisco to see Tom Jennings, about two years ago, he was stringing ethernet across parking lots in the dead of night before scheduled paving, and had a half dozen or so people who were "sharing" connections. Today, he's got what is approaching a million dollar per year business offering Internet connections specifically, nay militantly, without resale restrictions. He's also joining forces more formally with Randy Bush of RAIN in Oregon, as well as the North Bay Net, to form The Rainy Garden Network or RGNet. He also sports a Sprint connection.

Most exciting, this month, MCI, who officially denies any Internet product at all, has been feeling up almost EVERYONE WE KNOW IN THE INTERNET BUSINESS to sell them an Internet connection that doesn't officially exist. We hear they are going to announce December 1. We think there IS a desperate need for a second player, and MCI, who currently sports a Vice President of such things in Vinton Cerf, the closest thing there is to a "father of the Internet," would be an excellent candidate. If this happens, and we think it will, there are several excellent outcomes:

1. You will probably be able to get an Internet connection at the T1 level with no restrictions on resale from nearly anywhere in the U.S.

2. The "pipe" priced model will be effectively cast. Per minute or per packet charges just won't happen, and to good effect for everyone. The "Internet Pricing Model" will have effectively been adopted by, or perhaps imprinted upon, telephone companies.

3. Prices on T1 connections should exhibit some competitive pressure. That doesn't mean free, but it could mean a $1700-$2500 per month range pretty quickly for a full channel T1 connection to a major backbone.

4. Both Sprint and MCI will both sell more T1 telephone lines for Internet connection than they sell T1 lines for any purpose now - and think they've found gold.

The end-user delivery of Internet services will move to the BBS community and the larger systems such as CompuServe, AOL, Prodigy, Delphi, and so forth. These are the only such systems that have EVER provided the customer service and hand holding necessary to go online in the first place. Their callers don't WANT to go somewhere else for an Internet connection, they want the BBS and commercial service operators to bring it to THEM and that is how it will ultimately be delivered.

But as bulletin boards and commercial services will change the Internet, and strongly alter the way it is delivered, the Internet will also change bulletin boards. BBSs will offer an array of services from simple global e-mail to newsgroups, to telnet and ftp connections, and already several conventional BBSs are providing SLIP connections. It actually provides the first real economic legs to the BBS community, and allows the serious BBS operators to differentiate themselves from the free hobby systems, which will continue to thrive as well.

And the nature of TCP/IP and how this will be deployed on a PC platform opens up the platform a bit. Suddenly, tens of thousands of programmers can add on functions using Visual C++, Visual Basic, and WINSOCK more easily than any other kind of programming they can do. This is more modular and does an about face on current trends toward more centralized monolithic shelf packages of BBS software. The result will be a churning machine spewing tools of all kinds and varieties, to perform as yet unimagined feats based on this new form of universal connectivity. The SerWeb application described in this issue is so trivial a bit of code that you must see it to believe it. Yet it allows anyone with an IP connection the ability to run a World Wide Web server on junk hardware for almost nothing, and takes less than an hour to set up some simple documents on it. It is but a glimpse of things to come. An entire new frontier of software development has opened up before us. And the online game is all new again.

We recently overheard one sysop of a major east coast board comment, "After all these years of building a system, we have to start all over again." We also heard from a second BBS operator in a similar vein - "After all these years of building a system, we GET to start all over again." We think ONE of them will emerge a winner - again.

It takes a certain amount of vision, courage, and generosity of spirit to engage in the current game of online connectivity as a business. For those who have it, the future is very bright.

Jack Rickard
Editor Rotundus
Boardwatch Magazine

Letters to the Editor

Boardwatch Magazine
8500 W Bowles Ave Suite 210
Littleton Co 80123

LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, Boardwatch Magazine, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)973-3731 or by e-mail to letters@boardwatch.com.

Dear Jack;

Now tell me, is that **your** HMMWV that you're standing beside in the photo in Boardwatch?? Yours looks a lot cleaner that the last one the Army issued me. I had a canvas tarp on the top that we had to put ponchos over to keep the rain out of. But I had my driver cut a piece of 1/2 inch plywood to go across the back and I slept there during the "great jihad" in Saudi Arabia. Got some of the best sleep in my life in the back of that vehicle (after getting used to it over a period of many months). I sure like them much better than the jeeps, lots more stable and less prone to flipping on the highway.

LTC Michael W. Cannon
D/History
USMA
Room 163B Thayer Hall
West Point, NY 10996-1104
km5380@usma7.usma.edu

◆◆◆

Dear LTC Cannon;

Well yes and no, but good eye. It is actually termed a Hummer, rather than a HMMWV - the civilian version of the same thing made by AM General. I worked on a Request for Proposal for the TOW Missile Launch version of HMMWV in the early '80s while at Emerson Electric Electronic and Space Division, and was quite fascinated with the vehicle.

The Hummer is the same basic vehicle, but with a few add-ons such as chrome wheels, electric door locks, electric windows, air conditioning, a compact audio disc player with a monster JVC sound system and about a dozen speakers, remote mirrors, padded interior, trick seats, and so forth. A HMMWV with creature comforts if you will.

John Medved operates the MEDVED Autoplex here in Denver and has himself become something of a fan of the Hummer. He built a demonstration track behind his Chevy dealership and sells a few of these each month. I went out for the demo, and yes, I did take one home with me. In fact, he sold me his wife's '94 Hummer, which was of course tricked out with all the options.

The vehicle is thoroughly impractical for any use I can imagine. This one does not have a canvas top, but is a wagon with a central tire inflation system that allows you to deflate the tires while rolling to get through sand or mud or snow, and actually pump them back up to 35 pounds with the flick of switch, while still rolling. It's 6700 pounds, and can barely seat four none too particular adults. It's noisy, with an egregious diesel in it that sounds like a tank. There is virtually no storage in it anywhere. The drive train runs right through the middle of it. It's a little ridiculous. And John is a might proud of them price-wise.

IT RUNS ON TESTOSTERONE

But it can go about anywhere I want to go, and here in Colorado, that actually is saying something. It's big, rattly, and looks a bit like junk even when new. So yes, I have rather fallen in love with it. It IS the ultimate 4WD testosterone vehicle and I've already done things to this poor machine that I would be embarrassed to relate. It hasn't complained. So neither have I.

Jack Rickard

◆◆◆

Dear Mr. Rickard;

I really enjoyed your response to Frank Manning of Zoom Telephonics in the October issue of BoardWatch. It couldn't have come at a better time. I was just getting ready to write you a letter about my recent pitfalls in getting a Zoom Modem repaired under warranty.

I had just returned from four years in Japan where I ran a BBS. While running the BBS the Zoom modem on it went out. I decided to wait until I got back to the states before getting it repaired as it gets calling from overseas.

Anyway, I got back and got my modem. I immediately tried calling Zoom for support. Well, you can guess the frustration I got when I tried to explain to their voice mail system that I had a broke modem and needed it fixed. I left my name, number, etc. as instructed by their computer and eagerly awaited their return phone call. (What a neat idea. Make my call short and let them spend the money on the return call. NOT!) On the third day I decided to call and see if maybe their voice mail system crashed and my message got deleted. Once again I was greeted by Mr. Chips (The computer). One again I left a message. I waited two hours this time before calling back. (Here's how to talk to someone at Zoom: I decided to call back again. This time I stayed on the line until someone decided that I didn't know what I was doing and picked up the phone. I explained that I had called three days earlier and demanded to talk to the repair department. I was transferred to the repair department where I was told I would have to wait as they were talking to a major supplier. (Ahhh, the little folks) When I finally got a chance to talk to a rep I was told that he had tried returning my call but I was not home. (Funny, I have an answering machine) Anyway, I did get a Return Authorization number which made me happy.

Well, at this time I had my BBS setup here and waiting for a working modem. I decided the fastest way to get this repaired and tracked was to send it Postal Express Mail. I sent the modem out on Wednesday afternoon and was told by the Post Office that I could call the 1-800 number to track it. I called on Saturday and found that it had arrived at Zoom on Friday morning. Success at last? Well, I decided to call Zoom on Monday to see if they were replacing or repairing the modem. Of course I talked with Mr. Chips again. This time they did return the call and left a message that they hadn't received it yet.

Funny, I guess the Post Office lied. Well, I called back on Monday afternoon and left another message of where and when they could get a hold of me. Sure enough they called back on Tuesday morning. (They're getting better at this) I explained to the rep how I had sent the modem and had tracked it. He told me that he still hadn't received modem at which I explained that I really needed it back and sorta forcefully told him I would expect a replacement be sent out that afternoon. I was told the one would be sent out within the next two days. Well, I finally got a replacement modem, which according to the post mark was sent two days later, and now I'm happy to own my LAST Zoom modem. Supra, here I come!

Thanks,
Stephen Thomas Pensacola Fl.

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Stephen:

Customer service is the toughest issue in modemville, both for the customers, and for

the vendors as best I can tell. Both struggle with it constantly. I understand your dissatisfaction, but almost all vendors seem to be doing the best they can under some very strange circumstances. The product life of modems has approached nil, the margins are approaching nil, and the demand is approaching the infinite. It's a hard trip. And Zoom, despite really a phone system from hell, doesn't do badly in all cases. I've heard from several people who liked the new models once they got them. And they are definitely a price leader. I saw a Zoom 28.8 V.FC in Software Etc. the other day for $149. I just couldn't believe it. The first V.FC shipped did not happen a full year ago (and not that long for Zoom), and here was a shelf FULL of them at $149. Unbelievable. I would prefer to be in the publishing business, or the BBS business, than the modem business. We're getting better product cheaper and quicker than logic would dictate. And in this 28.8 kbps round, Dennis Hayes personally spiked the price at launch - a tremendous boon to the BBS community, but tough on modem manufacturers.

Zoom did do a little dirty deed to some of our ONE BBSCON attendees and readers. And I get a little snappish about that. I would have probably let it ride under these really difficult market conditions modem manufacturers face now, but Mr. Frank felt moved to call my attention to a few of my sins, so in response I felt driven to trot them ALL out in the open where everyone could examine them in the open - at his request as I recall. But modem manufacturers all take their turn at various times falling over their feet. Hayes had its dark period. U.S. Robotics has taken some heat. And I doubt you'll hear John Wiley at Supra revelling in another's misery in this industry either. Many of these guys have been doing it too long through too many cycles and the complaint hits too close to home. Customer service is tough. It goes with the game, but it's tough.

So I wouldn't read much more into it than was said. The one good thing out of all of this is that at this point, there just AREN'T many BAD modem manufacturers left anymore.

Jack Rickard

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Dear Jack,

I really have a bone to pick with the BBS media in general. It seems that the media ignores on a regular basis the Amiga and their BBS's. I am a Sysop for an Amiga BBS (The Information Society, [814] 949-4028) that not only caters to the Amiga, but my IBM counterparts.

It doesn't seem fair to ignore the capabilities of my machine and Software just because the mother company is in dire straights. We [ie. Amiga Sysops] put a lot of time and effort into our services. Why should we be punished for our choice made? We can't just dump our investment. At the time when most of purchased our systems, Commodore was still going strong (Need we forget the C-64?). I feel that we should have our software and support covered just like any other machine. You seem to like spotlighting only the bigger systems. Not Fair! You only cover online service for IBM and Mac. Once again, Not Fair! I'm sure that there's more than one person out there that feels the same way I do. Well, in closing this, I'd just like to be given a fair chance to show the BBS community that we as a group do have some great features to offer!

Sincerely,

Brian K. Dougherty (AKA Doc)
Sysop of The Information Society

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Brian:

It's never been fair. It's just the way it is. You pick wrong, you lose. I'm still pretty sympathetic to the Epson QX-10 guys, a great machine, and my personal favorite was of course the Victor 9000 - as good a computer as spun a drive. I STILL hear REGULARLY from gents running bulletin board systems on CP/M machines - Televideo's very hot.

The truth is, Boardwatch doesn't do as good a job as I would like in covering the online community - and we're losing ground. There are entire NETWORKS of BBSs out there with software they love, that just don't make an impact on the community in a way that I can find space for. Do they deserve coverage? It's kind of a funny question. They've done nothing to NOT deserve coverage other than not be very relevant. My personal opinion is that any tool in the box that gets the job done the way you wanted it done was the right one, and cheaper is generally better. If enough of you decide the Amiga is the bergonias for BBS activity, I do hope I catch it when it becomes a trend. But right now, I don't see it that way. If I'm wrong, you could start an AMIGA BBS MAGAZINE and do very well. You would win. I would lose. What a country.

But ultimately, Boardwatch is to reflect what you and other BBS operators do, not dictate what that should be. If you like Amiga and it does what you want, keep doing it that way - no matter what you read in the funny papers.

Jack Rickard

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Jack;

Just wanted to say kudos on the terrific magazine that you put out monthly (ok, almost monthly :)). I've been a subscriber for some time now, and have been reading BoardWatch even longer, via the local Wall of Magazines. BW is an indispensable trove of information, not to mention the second most interesting magazine I receive each month, next to Discover (I get about 20 magazines, from computers to traveling to education).

I'm sure you've heard this enough, but I am going to take this opportunity to echo the experiences of some fellow readers. The distribution of the magazine by mail is more erratic than any other publication I receive. For instance, last month I received my copy in the mail only three days before the magazine stands. This month, one of the most highly anticipated issues of the year hasn't even arrived and I must go to the bookstore to read it! I wish there were a way to guarantee a consistent shipping/receiving schedule.

Unfortunatley, I understand the situation when there isn't much that can be done to remedy the slow speed of delivery, at least not on BoardWatch's end.

Other than that, I'd say great job! I love the articles, I love the letters, and you're almost likeable (grin, ok, so you're the most eloquent of editors I've ever read or personally known, for that matter).

Happyu amblings down the Information "Construction Crew Ahead" Highway!

Don Richards-Boeff **Spork@dkeep.com**

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Don:

We're trying on the delivery. But if you want the truth, we haven't a clue what we're doing. I've got half the mailing house industry mad at me, the postal service, and a guy in Brussels who got the October issue before the September issue. We'll keep after it. But we're kind of mail clowns without portfolio, and I'm running a little late myself on getting this issue out at all. About all I can promise is that when we get done with it, we'll mail you a copy. In any event, thanks for the kind words.

Jack Rickard

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Jack.

Thought I would pass on to you how certain Internet providers here in the Southern Maryland area are perceiving BBS systems. They consider us a THREAT.... I currently pull my Internet feed via a UUCP connection from Holonet. (Bonus Points to Holonet) But being there are 2 local independent Internet providers here in the local area I decided I would try and get my UUCP feed through them. I assumed they would rather have my hard earned dollars NOT!!!!!!!!

The basic response was this "We do not feel it is in our best interest to provide a Internet UUCP connection for the local BBS's as this will cause us revenue loss" Jack all we wanted was a Basic E-Mail feed and a 100 or so Usenet Newsgroups it wasn't like I was declaring a hostile takeover.

I laughed at the guy and said sorry I'm doing it with you or without you. I was then threatened that it would not be wise to offer FREE Internet E-Mail. Hints of legal action!! I again laughed and said go ahead and try.

Jack I really don't think there elevators go to the top floor. 1. BBS systems that provide basic E-mail and a few Usenet newsgroups provides a means for users to get there feet barely wet before moving on to full Internet access in which the providers provide 2. We get a chance to mold them into responsible users.

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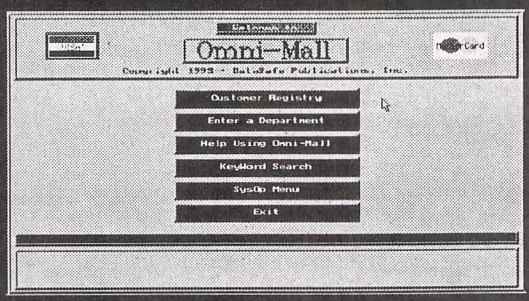

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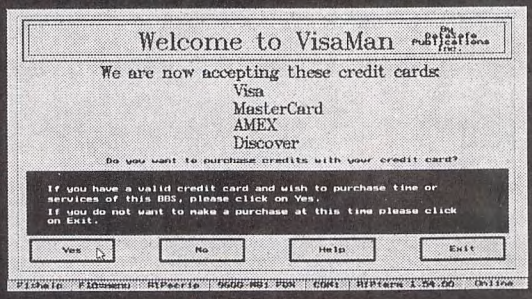

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ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

My cash flow is sufficient to run a very nice Hobby BBS. But after comments like from several Internet providers I am determined that within 24 months we will have our own full internet connectivity. To Hell with em. Like I told em we will do it with ya or without ya but next thing were gonna do is put em out of business.

It's all part of the power monger control and the almighty dollar. The BBS operator has had a major impact in developing the huge online community. With luck and cooperation among all BBS operators and online services we will be the future ON ramps to any and all online services.

Todd Cochrane
Cochrane@HafaAdai.Com

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Todd:

It's all just a little worse than you portray it. This is at the heart of what the CIX thing was about. You may take some comfort in the future. There will be approximately TWO Internet Providers in the future, Sprint and MCI, and they will distribute mainly to bulletin boards and businesses. The BBS and existing commercial services such as AOL and CompuServe and Prodigy will be the interface for the online community. And the little IPs you decry will probably be gone all too soon.

Which is not anything I take any comfort in. Many of these people have been pioneers, some of them quite selfless, and none of it would have happened without them. But it has been a little frustrating. We are facing a tidal wave of some 10 million REAL callers (as opposed to Internet "statistics") that are going to be demanding connection in the next year and a half. If we don't get another level of fanout on the providing end in under these guys, it isn't going to work so well.

These ISP's are standing on the beach with their little tin buckets asking basically "how do we make sure our bucket gets full." I've pointed out over the waves to show them the tsunami that's coming, explained about tsunamis, and admitted readily that the tsunami at sea is only about six inches tall, but moves at about 450 miles per hour and does get a might bigger as it approaches shore. After hearing all that, they still want to know if their bucket will really get FULL from the tsunami.

About all I can do at this point is tell them "Oh yeah. Your little bucket is going to get real full here in a little bit. Just stand right here at the waters edge, and when you start to hear noise, hold it out just so... it'll be full just a little while after that..."

All of that's true. So I see no need to note that I myself need to be excused for a quick trip inland, or that I'll be returning to pluck their drying white carcasses from the tree limbs after it's over. But the real funny part is a few of them have been reading Boardwatch for some time and are vaguely aware of the basic online arithmetic, so they are hedging their bets....they're taking TWO buckets to the tsunami beach party.

Big parts of TCP/IP are about to migrate straight through applications directly INTO the operating systems - Windows and OS/2. The media has sold Internet to the world, and I guess we're as guilty as any and earlier than most. But statistically, almost no one online has seen the Internet yet for the first time. They are about to be handed the tools, and told there is even GREATER gold up in them thar hills. And unless we get the commercial online services and the BBS operators to provide connections, there won't be enough ever. The customer service aspect of providing Internet Services cannot be scaled quickly, and may not be scaleable AT ALL. So the people you are dealing with are destined to be beach debris, and there is no point in berating them about it any further. In fact, it's too late. They can't at this point move quickly enough to be viable as players. The window of opportunity has passed. Further, we STILL have the problem before us, and if we don't get the BBS community through the learning curve and armed with the tools to deliver these services within a year, we're going to be out of bucket brigade to the beach and the whole universal connectivity dream starts to take on water big time. I've been preaching this since 1990, and more or less continuously for the past three years. I'll continue in that vein.

Jack Rickard

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Jack;

We wanted to thank you for the opportunity to be part of one of the best conferences that we had attended. It was a good show because this year many of the big boys (Delphi, AOL, Prodigy,etc) were there. There is one issue that seems to be a sore spot to these services. It is the title of "cultural BBS or African/Latin BBS ". As you know, as the world of computers emerge into each household, more modems will be bought and used and people of color will wonder where are the Black BBS', or the Hispanic, or Jewish, Asian, etc... We are surprised that none of the commercial online services has contacted any of the sysops of these boards for help.

We are here to help in areas of OUR expertise. We are Afra-Span Network and have been operational for over 4 1/2 years. Our purpose is the social,economic, educational, spiritual and cultural growth of African and Latin descendants. Our strength is our users. Our users take part of our interactive online forums that we offer because they know that it is being run by one of their own. It is similar to talk shows and radio stations. People of certain heritages will only listen to or watch those things that are of them, by them and for them.

It also works in reverse to. We know that there are many White Americans (and people of European descent) who would like to know more about these markets but do not know where to go, who to speak with, what dates are important, and what to say in the presence of these individuals without being embarrassed. A famous case in point is H. Ross Perot and his "you people" speech. Lack of respect and cowardly expressed racism in corporate America and in the government seems to not only be the fading norm but is still being taught by parents afraid of "Blacks" taking over.

The sale of our BlackFax calendars gave us a true indication that there are many Whites that are truly and genuinely interested in knowing something about American History (the one that included Blacks, Hispanics, and Asians) because they bought more than Blacks and Hispanics at the show!

Our conferences that seems to keep callers calling us back are those like B-WON (Black Women ONline), Piss-off (what really upsets African/Latin Americans), education, Black men—an endangered species, Racism and where we can find it, Neighborhoods (where are the drug dealer hideouts and where are dangerous spots in communities), Holidays that have not been recognized "officially" yet, Businesses (where are the Latin and African businesses that need exposure), etc.

For those who would like an Internet address no matter where they move, we can sign them up for $3.00/month and all they pay for is usage charge. This service is also free to call into since it uses an 800 number nationwide and can be reached very quickly. There is an optional Windows interface to make point and shoot of your E-mail easier since this is what most people need anyway or use more than all of the Internet features.

Well, we look forward to another impressive show in Tampa in 1995. If you or anybody is interested in any of our services, please do not hesitate to contact us in any of the following manner :

Afra-Span Network
6735 Graves Mill Drive
Norcross, GA. 30093
(404) 270-5365 (voice)
(404) 270-5522 (data)
info@afraspan-net.com

Walter Findlator
Network Administrator
Afra-Span Network - Atlanta

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Mr. Findlator:

I probably disagree with almost everything said here, that is if I understand it. It does seem to be a mixed message with an inherent conflict. If you are against racism, why are you calling for areas online specifically for people of color and latin heritage, and damning larger services for not supplying them? In most of the online communities I haunt, I would be hard pressed to tell what ethnicity most of the participants are unless they specifically make a point of telling me. One of the distinct advantages I find in electronic communication, and specifically in some of its limitations, is that we have to deal with each other based on the expression of minds and the content of our character, and our race or what we drive has little bearing. If I understand you, you want to bring racial conflict into the online arena on purpose? To what end?

But given that dubious mission, did I understand you correctly in that you thought one of the executives from CompuServe or AOL should contact one of the sysops of your network for "help." What help do they need? I've met many of them, and they're mostly white. And the way most of the forums on these services came into being was that someone from outside the organization PROPOSED a service, and often was responsible to some degree for implementing it. I find the picture of Steve Case saying "Hey, we need a black forum, let's go find some blacks!" just a shade obnoxious if not broadly nauseating. If you think they should have one, for any legitimate reason of celebrating some cultural aspect, and can make a case for participation, put together a proposal and send it in. These guys have thrown crap worse than that at the wall before and some of it sticks. If they thought it would bring in 12 more callers, they'd go for it. But that's how it works.

I can't really picture the scenario you paint of "where are the black BBS" or Latino or Jewish. Actually, there have been all of those for any number of years that I'm aware of and more or less successfully. But it is empirically and demonstrably untrue that people online will only go on services "run by one of their own." In fact, this is preposterous. Unless the topic IS specifically cultural, how would they know who ran it in any ethnic sense?

Finally, how can you criticize H. Ross Perot for referring to "you people" in the same missive where you are calling for separate online facilities to specifically cater to blacks and latinos as a differentiated group? Poor form for him to do so, but appropriate for you? And if I understand this, you trace all of this to parents teaching their young to fear a takeover by blacks?

That said, your conferences do sound intriguing. I'm a little bit of a sucker for specialized topics even if these seem a little race-hate based. And if by printing your letter we can provide a pointer for anyone interested in those topics, consider it done. I still think you might consider the possibility that some of the attendees just liked your calendar and bought one to have it.

Lighten up. See you in Tampa.

Jack Rickard

♦♦♦

Jack:

I read with some interest your notes from the September issue regarding Mssrs. Adams and Schoffstall. I thought the piece showed some understanding of both sides (with an obvious slant) of this issue. As this was the first issue of your mag I had seen I was very interested in your views of the Internet and BBS's in general. I am being asked to head up a "new and different" type of BBS so I was also interested in some of the more technical articles and information I thought might be available in Boardwatch.
That interest faded very quickly when I realized that you are among the many thousands of people who, on the surface, appear to have some knowledge of businesses outside your field of expertise and apparently offer your "expertise" or opinion on the subject, thereby revealing nothing but your own ignorance.

In your case you say "A very disparate and unconnected group of people have been looking for a product for over 30 years that would work with a concept called "multi-level marketing" They've tried soap,..motor oil..vitamins..cosmetics...stain removers ...rubber kitchen goods. But they keep coming up against some astounding properties all these commodities share:"

1).....
2).....
3).....

"And finally, at any impressive rate of growth, these pyramid schemes would very rapidly involve the entire population after just a handful of levels. Everyone would want to have it."

"It just won't work....at least not with soap...."

Hogwash!!! You are correct that some companies have been around for thirty years. You should check your facts a bit more closely in the future as to whether or not some particular business concept will or will not work however. In the case of the Amway corporation, they have been in business for 30+ years, growing in more than 90% of those years. I would love to have a business like this:

1) Debt free!!!
2) Wholly privately held
3) Growing in more than 40 countries and territories around the world.
4) $5 BILLION dollars in gross sales
5) Retailing more than 3000 different products

Other than the privately held part Mr. Rickard, is your business anywhere close to this one? I think not. Several heavy hitters in the business community are looking to this type of marketing to be THE method by which more than 40% of goods and services are brought to consumers by the turn of the century Mr. Rickard. Whom you may ask? Try Paul Pilzer, John Nesbitt, the leaders of many companies such as Sylvania, Sharp, G.E. and others who have chosen Amway as a method for distributing their products and services. Who do you think has made Voice-Tel as big as it is?

We won't even get into how big businesses like Tupperware, Avon, NuSkin and Quorum are today. Believe me when I say that you are either very uninformed or misinformed or both on this issue.

Yes I am an Amway distributor. No I am not rich. My business is exactly what I have made it to be. No more - no less.

Please Jack, stick to what you know or get someone to check your facts for you in the future regarding business concepts of which you have an obviously limited knowledge. Other than this point I enjoyed your mag.

Phillip Slater

pslater@multinet.win.net

ps: You might keep one eye right behind you. A big company might discover how little it costs to run a board and get into the BBS business to sell more product. Might be fun for a little competition, huh Jack?

♦♦♦

Dear Phillip:

Yeah, we're pretty superficial all over. It's a kind of a scam we pull where we look like we know what we're talking about, but really haven't a clue.

I would mention this, if I could figure out a way to get everyone who reads Boardwatch, to also go out and harrass the shit out of their friends to get them to buy Boardwatch at $9 per copy and go out and sell it to THEIR friends, even though the mag is on the newsstand anywhere at $4.95, and hold feel-good conferences showing them how it is really GREAT to be rich and they can be too if they'll only buy into this line of crap, maybe I would be a $5 billion big stick such as yourself. But I can't, I don't, and I wouldn't anyway. So just label me one of the pencil neck negative-attitude losers and let me go my way in peace, penniless and still clueless.

But I've got a Hummer.

Jack Rickard

♦♦♦

Dear Jack:

Let me start out with the obligatory "Thanks for a great mag" and "Keep up the good work".

First, a correction: In your "Modem Watch" you have the BBS number for Zoom Telephonics listed as **617-423-4733** when it is in fact **617-423-3733**. Unfortunately, when I last went a-huntin' for a 28.8 the correct number didn't help... no answer.

Second, an addition (hopefully): You have quite a decent list of BBS Software Vendors... all the major contenders seem to be there. Understandably you can't include EVERY BBS package (the Telegard/Forum hacks alone would take up a few pages), but for the LIFE of me I can't understand why you would include Opus-CBCS, and not Maximus-CBCS.

Maximus, obviously based on Opus, is a far more robust system offering FAR more configurabilty and much better support (offered by other users). It is, like Opus, available completly free of charge thanks to generousity of it's author, Scott Dudley. The software is two years old and still stands up to today's standards... even has a built in scripting language. There are both DOS and native OS/2 versions, and there's a much awaited Max 3.0 in the works (Just don't ask Scott when it'll be ready!) In case you decide to include it in your listing:

Product :	Maximus 2.01
Company :	N/a
Voice :	N/a
Fax :	N/a
BBS :	613-634-3058
Platform :	DOS / OS/2

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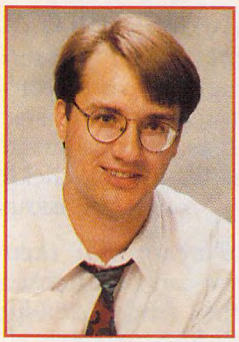

"I promised to offer the best value in Host Information Systems Software, and our new PCBoard Version 15.2 delivers big time, with at least 8 FREE, essential operating functions the competition charges you for or doesn't even have!"

Steve Klingler,
VP/General Manager
Clark Development Co.

By Jim Ackerman

Why is PCBoard is the most widely used BBS software on the market today... used by 23 of the top 100 boards, including Software Creations, voted top BBS the last two years... and the only commercial BBS software *ever,* to win *PC Magazine's* prestigious... ***Editor's Choice*** Award!

The reason is unmatched *flexibility* and *adaptability.*

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Who wouldn't want these 8 essentials the competition considers options you must buy

1 Why should you be charged extra for such an essential function as an **Internet Gateway**? *You shouldn't!* So, it's part of the standard package automatically built-in to PCBoard 15.2. Most other BBS manufacturers charge you for it... *some charge more than their regular, standard package.*

2 **Credit Accounting**... surely the ultimate essential. PCBoard doesn't make you pay extra for things you *must* have. With the new Credit Accounting function, you can charge or reward the user for each activity and decide the charges for each; Operate on pre-pay or pay-as-you-go terms; Track in any kind of local currency you choose, or as credit units. And set your own peak times, including holidays. Again, maximum flexibility!

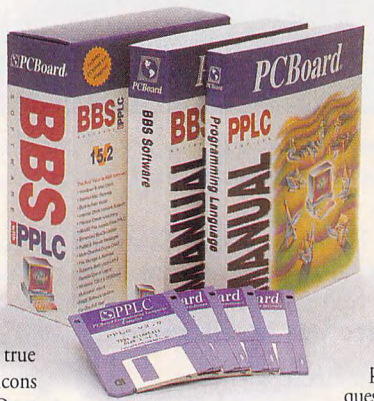
3 Everyone on your network can now easily use the new, fully integrated **Windows E-Mail application, PCBMail**. No gateway needed because PCBMail uses the PCBoard configuration and data files directly.

4 You won't need a costly front end to add **Fido access** to your board. It's already part of PCBoard 15.2. Out of the box, your users can do the "Fido thing" right from your PCBoard message bases.

5 **Built-in QWK** makes you popular with your users. And 15.2's QWK now includes Net Status and File attachments. What a time and money-saver!

6 Now, unleash the power of dBASE III and **Database Access**, with on-line applications created with the award winning PCBoard Programming Language (PPLC).

7 Your BBS can truly go worldwide with **Multi-lingual capabilities.** PCBoard 15.2 gives them to you, including support for 2 byte and reverse printing international character set.



8 If you're ready for **RIPscrip Graphics**, registered PCBoard customers download PCBoard's RIPKit FREE , so your remote callers can choose between ANSI, ASCII and RIP, on your BBS. This out-of-the-box capability presents the caller with a true GUI interface, complete with graphics, icons and mouseable point-and-click menus. Once again, maximum flexibility and adaptability for you and your users.

But wait... there's more

We've only scratched the surface. There's literally not enough space to cover it all here.

Like...you can use the same newsgroup names as the Internet on PCBoard because 15.2 supports conference names up to 60 characters long.

Save amazing amounts of time with our new, Automated, Rules-based File Maintenance Utility. Plus... local logins, 19 FREE PCBoard utilities, and even FREE support for MultiPort hardware, all "**standard equipment**" on PCBoard version 15.2.

How can they do all that... and without raising the price to boot

PCBoard was designed with an *open architecture,* so *flexibility, adaptability, reliability* and *stability* were built-in at the start. That's why PCBoard can offer all of this functionality... all of this power... all of this *value!*

And even with all of these new benefits, the price hasn't changed. Begin as small as one or 2 lines for $150.00, and grow all you want. *Only PCBoard supports up to 1,000+ dial-in or local access nodes.*

It's the perfect solution for the 1-line hobbyist to the Fortune 500 international corporate E-mail application. Maybe that's why PCBoard has more installations than any other BBS system software.

Who else gives you FREE Upgrades for a year... FREE telephone voice support for 12 months... FREE BBS support for life... and instantly installs as an upgrade from your FREE demo

NOBODY does it all... and only PCBoard installs as an upgrade from your demo. Just imagine the time and headache you'll save, not having to set your entire system up twice! Once you try our demo, give it a complete shakedown, and decide PCBoard is for you, simply install your full program upgrade and instantly be operating without skipping a beat.

And don't forget... from the time you get your demo, we're behind you all the way. Customers get any improvements we make — FREE for a full year. Need tech support? Our "live-on-the-phone" support staff talks you through your questions. It's FREE! And for as long as you're a PCBoard sysop, you can count on FREE online support through our Salt Air BBS.

Get your FREE DEMO and a lot more

Get your FREE Demo online 24 hours a day. The phone number is **801 261-8976**. Enter DEMO ACCOUNT as your login name to bypass the usual registration process and get online quickly.

Or call us at **800 356-1686** (or **801 261-1686**) and we'll ship you a complete introductory kit, including FREE demo, comprehensive brochure, & special new... *Guide To Setting Up Your Own BBS.*

When you actually order by phone, and give the code from this ad, we'll also include a special 4 tape audio program from two nationally renowned direct marketers, to help you quickly and easily spread the word about your BBS, whether you're a hobbyist, or you see cyberspace dollar signs in your future. It's a $47.77 value.

Naturally, our program is guaranteed for a full month. If you buy and then decide PCBoard isn't for you within 30 days, simply return the package for a complete refund. But keep the 4-tape audio program as a FREE gift from us, just for trying PCBoard.

PCBoard®
Clark Development Company, Inc.

3950 South 700 East, Suite 303, Murray, Utah 84107-2173
Tel. 801.261.1686 • Fax. 801.261.8987 • BBS 801.261.8976
E-Mail: sales@clarkdev.com • tech.support@clarkdev.com

For online demo users or new registrations: Baud rates up to 28,800 bps, no parity, 8 data bits, 1 stop bit. ASCII, ANSI, and RIP Graphics are all supported. We'll even let you download a copy of RIP Term, if you aren't already compatible.

CODE: BWM1

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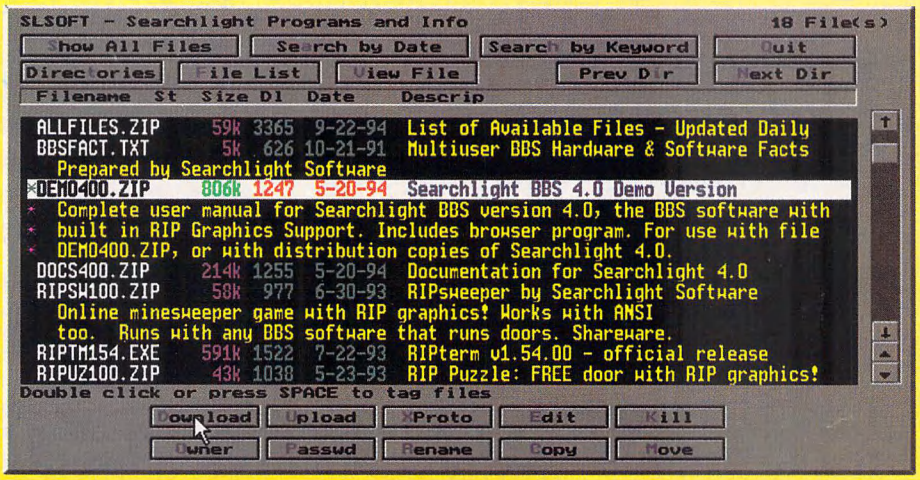
Searchlight BBS...



Our RIP file manager lets you scroll anywhere in a directory...you can tag items and run commands by clicking with the mouse

The working scroll bars in *Searchlight 4.0* let you scroll through a message, file or directory list with your mouse. You can select messages, tag files, set options and run commands just by clicking with the mouse.

Searchlight 4.0 creates RIP menus on the fly, so you can build custom menus in seconds. And *Searchlight 4.0* is the only BBS program that displays RIP locally—so you see the same screens your callers do.

We do RIP better than anyone because we've been doing it longer than everyone. *Searchlight 3.0* was the world's first RIP-compatible BBS. *Searchlight 3.5* was the first BBS that generated RIP graphics—the first to offer scroll bars, pick lists and "on the fly" menus.

Searchlight 4.0 is the ***only*** BBS that displays local RIP. It's the ***only*** way to give callers a true GUI with no proprietary terminal.

And 90 days after TeleGrafix releases the RIP 2.0 protocol, we'll introduce *Searchlight 4.5*—the first BBS program that supports it.

When the first Bulletin Board Systems went online in 1978, graphical user interfaces didn't exist. Callers had to stare at text menus and memorize commands; there was no alternative.

Today, everyone prefers the dazzling screens that Windows and OS/2 provide...but most BBS programs still display the same drab, confusing text menus that the first programs did.

The information superhighway is full of exciting stops; no one has to call your BBS anymore. If they see cryptic text menus, they won't call back. You have to give callers the dazzling graphics and intuitive menus they prefer. That's why you need *Searchlight 4.0*.

"Searchlight is doing a marvelous job incorporating RIP into their BBS"

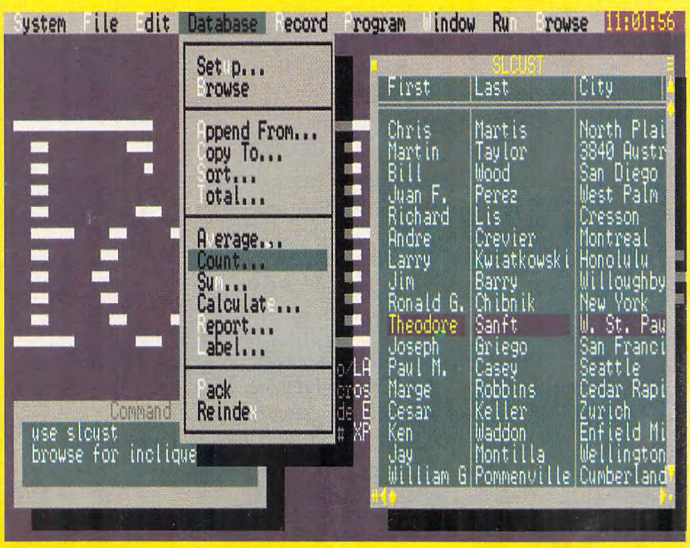
Boardwatch Magazine
July, 1994

RIP: We Show—Not Tell

The Remote Imaging Protocol by TeleGrafix gives callers the graphics and mouse support they expect; that's why callers prefer RIP. That's why BBS developers are scrambling to add RIP—and telling everyone that their RIP is "as good as Searchlight."

Well, talk is cheap—and seeing is believing. It's easy to see who the leader in RIP support is...look at our competition and keep asking: ***"Where's the RIP?"***

Other companies love to tell you how good their RIP support is. But they hate to show it to you in their ads, brochures and test drives. They won't show you their RIP support because they know they can't match ours. Because nobody can.



Our direct video support lets you run any text-based DOS program as a door

you won't believe your GUIs!

Improvise Without Scripts

If you want custom menus, some companies make you buy their script language and write routines in it. That's not customizing—it's programming.

We think our engineers—not our sysops—should write the code. Our menu editor lets you put any command (we have over 100) on any menu. You can nest menus 40 levels deep and add doors to any menu—even build executable menus that run lists of commands.

The automatic menu generation in Searchlight 4.0 lets you turn any RIP screen into a custom menu

Then use our RIP styles editor to add buttons and wallpaper—we'll generate your menus on the fly. Or use your favorite RIP painting program to draw RIP screens...and let us put your menus on it.

If you want a custom BBS, we help you build it quickly and easily. When you buy *Searchlight 4.0*, you can leave the compiling to us.

Open Any Door

A hobby BBS might want to add external programs ("doors") so users can play online games. A business might need to let their users drop to DOS and run a custom application.

Some major BBS programs can't drop to DOS at all. Others force you to install a shell utility.

Searchlight 4.0's built-in DOS shell lets you run any text-based program (like FoxPro, dBase, Paradox or applications created with Clipper and Clarion) online. Just set a switch and forget it; we make running spreadsheets online as easy as 1-2-3.

"Searchlight remains one of the easiest BBS packages to set up and use; it is also one of the least expensive"

PC Magazine
June 14, 1994

No Fine Print

Your callers will love the things that *Searchlight 4.0* can do. You'll like the things Searchlight Software won't do.

We don't sell "Digiboard" or "network" versions—support for intelligent multiport cards and LAN software is ***free.*** We support Internet addresses; just add your favorite utility. Tech support is ***always*** free; if you want more lines, we credit ***all*** your purchase price toward your upgrade.

We even include the freeware version of RIPterm (TeleGrafix's RIP-compatible terminal), so you can help all your callers "get RIPped."

So get your free, fully functional test drive of *Searchlight 4.0* now...and find out why everyone is saying that we're not like all the other GUIs.

Single line	**$99**
3 lines	**$179**
10 lines	**$299**
Unlimited	**$399**

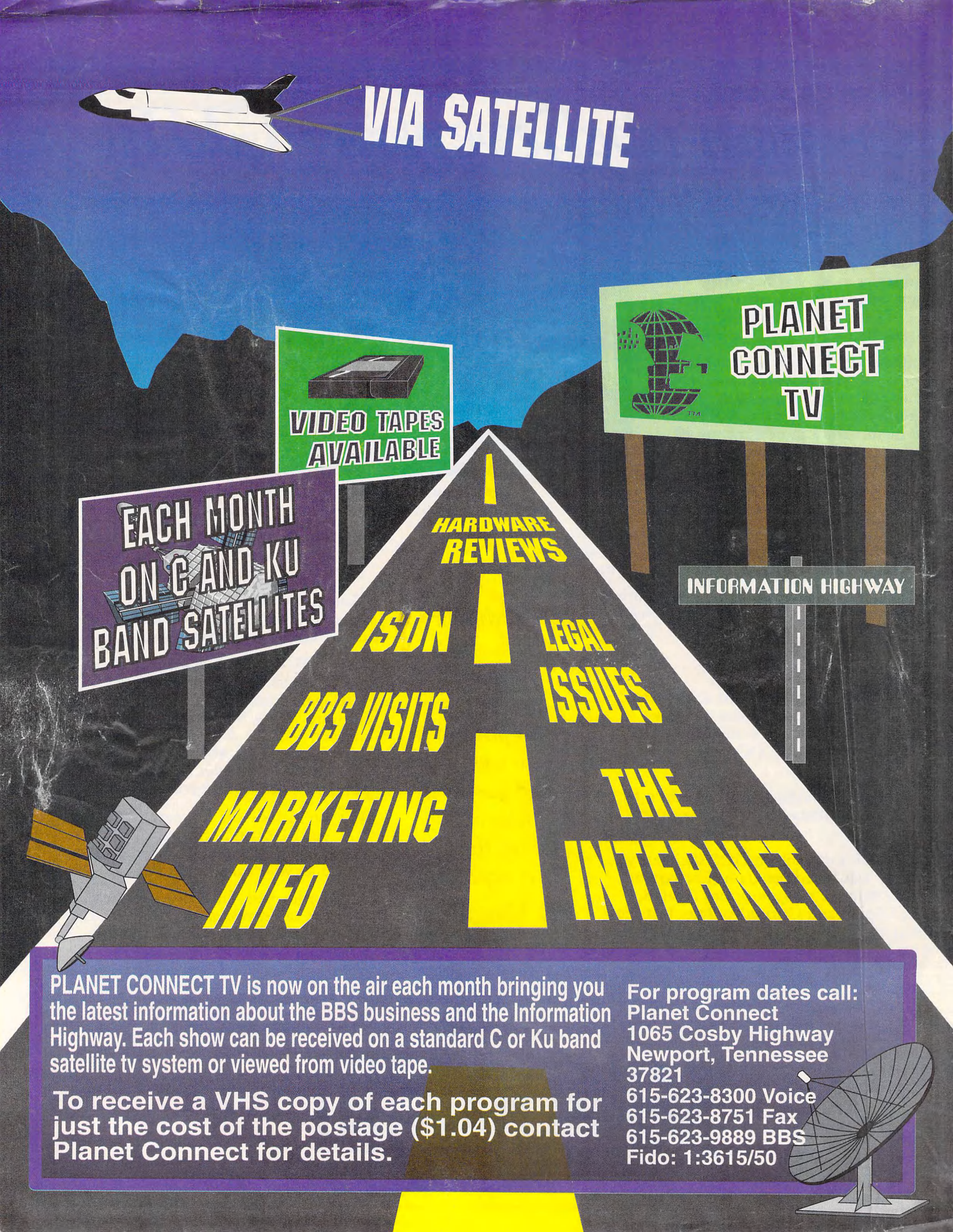
Windows, OS/2, RIP, Paradox, FoxPro, dBase, Clipper, Clarion and Digiboard are trademarks of their respective companies.

SEARCHLIGHT

800-988-LITE

Voice: 216-631-9290
BBS: 216-631-9285
Fax: 216-631-9289

6516 Detroit Avenue
Cleveland, Ohio 44102



PLANET CONNECT TV is now on the air each month bringing you the latest information about the BBS business and the Information Highway. Each show can be received on a standard C or Ku band satellite tv system or viewed from video tape.

To receive a VHS copy of each program for just the cost of the postage ($1.04) contact Planet Connect for details.

For program dates call:
Planet Connect
1065 Cosby Highway
Newport, Tennessee
37821
615-623-8300 Voice
615-623-8751 Fax
615-623-9889 BBS
Fido: 1:3615/50

TeleLines: LAN(255) PC(255)
MultiTasker : DOS (Requires DESQView or simlar program, or LAN), OS/2 (Operating System)
LAN Logins : Yes
FIDO : Internal
Internet : 3rd Party Util
QWK : Internal
Other : 3rd Party Util
Chat : Internal
Maximum price : $0, Minimum price $0
(For non-commercial use, commercial users should contact Scott Dudley)

Third, a blurb. PCboard 15.2 is in BETA, and it's sweet. Built in uucp support, built in Fido support, and too much to mention. I just switched over from Maximus/2 and even though it's still DOS software and in beta I haven't thought about going back yet!

And just in case you weren't aware, you are now suspected of conspiring along with Galacticomm and eSoft to prevent the formation of comp.bbs.falken! See **comp.bbs.misc** for more details.

Niall Kavanagh
SysOp, Known Space **(508-897-6573)**
Fidonet **1:333/679, niall@kst.com**

◆◆◆

Niall:

Thanks for the update on the modem list, and I'll see what happened on the Maximus entry. They were in there at one time and Maximus is still very strong in the OS/2 community.

For the record, and I'm on one, I think ALL BBS packages should be allowed a COMP.BBS.WHATEVER newsgroup. I made a strong case for this in comp.bbs.misc many months ago when it first came up. And a comp.bbs.falken sounds great to me. If anyone represents otherwise, they are uninformed in their confusion.

Jack Rickard

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Jack:

I would like to know, since I don't know much in this field, how do you set up a multi line BBS, I mean, the hardware part.

I figure that you insert the DigiBoard and from it, you obtain connections, into wich you plug cables and afterwards, modems. Is that correct?

What about Rackmout systems? How are these set up? Do you plug in the mount, and then add individual internal modems to it?

And just another question, what's the best way of caching and using RAM Drives on a BBS, single and multinode?

Don't worry, I won't forget: It's a great magazine, the only source of information here in Costa Rica.

Ignacio Solis
rsierra@cariari.ucr.ac.cr

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Ignacio:

First the serial ports. Digiboard is a specific brand, and there are many others. What you are looking for is a multiport serial card. Typically, this is a card supporting 8 or 16 serial ports and occupying a single slot on the PC. It will have one connector, usually some proprietary monster, that a proprietary cable plugs into. The other end of the cable usually separates into the 8 or 16 individual RS-232c serial connectors. These plug into the modems. The only proviso is that these cards come in two varieties: co-processor or "smart" cards, and simple IRQ extenders or "dumb" cards. Different BBS packages will support only smart cards, only dumb cards, or in some cases both. You probably need to select the serial card AFTER determining which BBS software you want to use.

One of the most common questions, surprisingly enough, is do you need a separate phone line for each modem. Yes. One line per modem.

Rackmount systems are essentially a case with a power supply into which you plug rackmount modem modules or cards. They have never been popular in bulletin boards because the premium you pay for the modems is usually terribly high, and as the modems become obsolete, you can't simply sell them off to your callers like you can the regular modems. Large line count systems are almost forced to use them because the cable mess just gets to be overwhelming without them. But few systems I've visited actually use rackmount systems for the two aforementioned reasons.

I don't use RAM drives. Many BBS operators do. It varies with the BBS software. I've found most caching schemes problematical when done in software. Some of the newer caching disk drive controllers, however, pose minimal complications and dramatic performance increases.

Jack Rickard

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Hello again Jack,

I noticed you have not included any bbs lists apart from your national list lately. I thought you might reconsider that. British Columbia is a hotbed for bbsing. There are over 400 bbs's in Vancouver alone, a city of only 1.5 million people. BC also has several freenets.

I remember you did a list for Ontario, Alberta, and Manitoba, so why not BC? Deep Cove was voted no 6 on your top 100 and it's not even the best bbs in Vancouver.

If you are interested in doing a list and need more information please feel free to contact me. I have been active in Vancouver for over four years and have know the scene quite well. I am the SysOp of SportsWorld BBS and we did meet at the first ONEBBS CON in Denver, but you probably don't remember as you met so many people there.

I might also add that Vancouver would be a great place for a future ONEBBS CON as it is one of the most beautiful cities in the world, especially in August. And don't forget that the exchange rate is really in your favour. I know many people in the Trade & Convention business here and would be glad to help you out.

I have included a file with two bbs lists for Vancouver & BC. The first is from the largest bbs in Vancouver and has information on both Vancouver & BC. The second list is just for Vancouver and is very comprehensive.

As well I'm not sure how one gets on your national list, but my bbs is unique as it is a bbs for sports fans, and in particular I sell statistics to all of those fantasy sports fans out there.

SportsWorld BBS 604-739-7622 Providing Statistics for Sports Pools
SysOp Mark Ward, Vancouver BC

Thank you
Mark
mward@swbbs.mlnet.com
http://debussy.media.mit.edu/dbecker/docs/swbbs.html

◆◆◆

Mark:

Yes, of course I remember you. And Vancouver is good BBS country. And sure, ONE BBSCON in Vancouver. I'll schedule it. No problem.

Jack Rickard

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Dear Jack,

I'm an advocate reader of your magazine. Usually it's read a dozen times or so each month. I have been mooting the idea of opening up a BBS for sometime now, but I'm having a incredible time decided on the software to use. I purchased the book "Creating Successful Bulletin Boards Systems" that received your "highest recommendation" a few issues back. I'm a little discouraged when I see the majority of systems loaded with tons of lines and storage. I'm stuck on three bbs packages to chose from - Tbbs Major and Wildcat.

I can only start with 2-4 lines and need a system to grow with quickly without taking out a mortgage on my home. I, and many others, could use a head to head comparison between the major bbs systems on the market tailored for every budget. Good issues would be speed, friendliness, expandability and cost efficiency. It's nice to know that the major systems on the market can do 64+ lines on a pentium class computer but, the bulk of the readers probably have sx's or dx's and may live in apartments limiting lines.

We need your help.

Sincerely,

Brian Piper
brianp322@aol.com

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Brian:

And I'd love to give it to you. But it isn't quite that easy. You may have read all we went through to do speed comparisons between Major BBS and TBBS alone. What is friendliness? Expandability? Cost efficiency based on what assumptions and what size system?

Added to that is the enormous variety of uses and requirements people have for running a BBS. Chat systems are not the same as mail systems are not the same as product support bulletin boards are not the same as Internet systems are not the same as file libraries, are not the same as specialized information services. And the requirements simply vary and in some cases conflict.

Finally, this is a volatile area of development with these companies releasing new software almost constantly. They are really like operating systems with dozens and in some cases hundreds of add-on modules, third party products, and utilities that dramatically alter any little category we could put together.

I have looked at this long enough and hard enough to make the following statements. I could sell a LOT of magazines with the information you describe in it, and I could actually put together something that looked like reality on paper. But it wouldn't be. IF you see such a device in print anywhere, you are reading bullshit that can potentially mislead you with damaging consequences.

Jack Rickard

♦♦♦

Jack,

Why are there not more FREENETS? ... I mean I feel everybody is justified to have a busisness... but if there is one FREENET, should there not be more?

Thanks.

Kurt Brust
kbrust@wizvax.com

♦♦♦

Kurt:

Yes. ALL online services should be entirely free of course. That way they can grow, offer more services, and we could have more of them. Absolutely.

Jack Rickard

♦♦♦

Jack,

Just dropping you a line to thank you for taking the time to accept my call about MediaHost and ONE BBSCON the other day. I enjoyed our chat and your magazine. I was pleasantly surprise to find that you actually accept calls from total strangers!

I hope to see Boardwatch continue to cover the growing Windows based BBS market, and possibly publish a comparison of available systems once the market fleshes out a little more with released products. I believe that the Windows based BBS market is poised for some rapid growth and as a Windows based sysop I know that there is quite a lot of pent-up demand out there in the hobbyist market at least.

I have been tracking all of the products that I have been able to get any information on, talking with authors of shareware and commercial, beta and release products, and have not found any that yet fill all of my needs (FidoNet/TIC/HATCH, and offline mail) here, but there do appear to be some very good options here, and coming down the pike for those who do not need these features, and there are some third party groups working on software that will meet these needs.

In closing, thanks again for taking my call and clearing up things for me and keep up the good work.

Brian Gay
Houston Windows: **713 996-7439**
FidoNet: **1:106/64.0**
InterNet: **brian.gay@f106.n106.z1.fidonet.org**

♦♦♦

Brian:

You've summarized my perception exactly. BBS software under Windows holds some very interesting possibilities, and I've seen nothing quite ready for prime time yet. We'll keep an eye on it.

Jack Rickard

♦♦♦

Good morning, Jack!

We've had some interesting turns of events here in Fort Smith, AR.

The Internet is available at Westark Community College for student and faculty use only. Some Internet research facilities are available to the public, this has not been widely publicized. We have nearly 30 BBSs, many connected to Fidonet. Only GEnie has a local node. All the other national services are available only through third party packet networks.

The Chamber of Commerce, W.C.C. and The Fort Smith Public Library formed a Task Force to look explore how to go about making the Information Highway, specifically the Internet, widely available and affordable in our area.

The radio station I work for received notice of the first meeting of the Task Force. The first thing that jumped out at me was that the local BBS Community had no representation in the group. So, advising my supervisors of what I was doing, I attended the meeting as a spokesperson for the BBSs. We had another reporter handle the story duties.

At the end of the meeting, I stood up and noted the curious lack of BBS representatives. I came armed with a list of BBS Numbers and a list of potential BBS representatives for the Task Force. They were quite amenable to my suggestion. Not entirely unexpected, they invited me to become the representative (although I would have preferred someone else serve. I like to stay behind the scenes).

So, I'll be quite busy over the next several months helping the Task Force with its work. There are representatives from the local RBOC, Cable company and gas and electric utilities on the Task Force. There are also representatives from Westark, the public library, a computer systems development firm, a local soda bottler and a local distillery. This is an extremely divergent group. They have expertise in technology, in information services and histories of community service.

While I'm sure they have the best interests of the community at heart, and will make few big errors, I was concerned about the makeup of this group. There are some very powerful lobbies on the Task Force and I felt the local BBSs needed a lobby as well.

My goals as the BBS representative are to fit the BBS community into the local Information Highway extension wherever possible and to protect the interests of BBSs. I am honored to be able to serve, and look forward to what the Task Force can accomplish.

The point of all this is that, yes, one person CAN make a difference. I encourage others in communities with similar situations to become involved in Information Highway Task Forces if they are formed or being formed. If you cannot become a member of the Task Force, be sure to attend all the public meetings. Make your voice known and don't be discouraged when some of your ideas are scuttled. Sometimes the dragon wins. Sometimes the knight wins. But you have to get into the arena before you even get a chance.

If you need a little help, feel free to FREQ BBS-PR16.ZIP from Jackalope Junction BBS at **501 785 5381** or **501 785 2517** (Steve Prado Sysop). This file contains information on Public Relations, marketing and handling the News Media. You might find it useful

Robert Parson
Internet: **r.parson@genie.geis.com**
Fido: **1:3822/1**

♦♦♦

Robert:

I take no exception to what you say. But I would offer an observation that despite coming from a broad range of backgrounds, age groups, etc., those attracted to operating a BBS have some common traits. One of them is a desire to become lord and master of their own little universe, where things can be fixed or changed without meetings, politics, or bureaucracy. As such, they can be hard to organize, and they don't show up at a lot of city council meetings.

The usual reaction when I note this is to receive back a full in the face lecture on how BBS operators will learn to play ball or "get theirs" by way of just rewards in the political process. I don't know how to react to this other than to point out that those who live in frontier areas tend to move with the frontier. At the ONE BBSCON in August, one attendee noted to me that the meeting had the same excitement and promise of the early days of personal computers and that

these people were very similar to the pioneers of that era. I looked over his shoulder to see Dennis Hayes, Ward Christensen, Chuck Foresberg, Bob Metcalfe, Ted Nelson, and a couple of others all within spitting distance of each other. No, these aren't LIKE the pioneers of that era, in many cases they ARE the SAME pioneers. That's what they like to do best. And they're pretty good at turning up where the pioneering needs to be done.

There is no doubt regulation coming to the online frontier, laws, taxes, and a thousand come-lately's arriving on the scene to straighten us all out on how it should be done. These people perform the same useful function as most other bottom feeders such as carp, catfish, and so forth I suppose. But I find little to write about or admire in their genre. Video may be next. I don't know. But there is ever new ground to plow. And if you do go to such a meeting and find it full to the rim with BBS operators, I hope to be doing something different by then.

Jack Rickard

◆◆◆

Dear Jack -

I used to run a Diversi-Dial 7 line chat system on my old Apple //e back in 1987. The system fell down mainly because I poorly managed it. I'd like to have another try at it with my IBM this time, but I'm having a very difficult time finding IBM chat software. I am specifically looking for chat system software, not BBS software that has a chat system built onto it. The only two software packages that I have ever seen that fit this critera, are called Synergy and Diversi-DIAL. These are old products circa 1986-1990 and the companies that developed them are long defunct.

Do you, or any of your readers know where I might turn to find a CHAT system, not a BBS system with a chat door for the IBM?

Thanks much.

Sean Langford
CCCTO.SLANGFOR@GFSMEMO#@GE.GEIS.COM

◆◆◆

Sean:

Shades of Bill Noel. I haven't heard of Diversi-Dial for a number of years. No, I don't know of a "pure" chat system out there. There are several IBM packages that have interesting chat features, including Major BBS and TBBS with their Ultrachat module. DLX and Oracomm are flailing around in search of life at this point, but still sport a number of loyal adherents.

I'm a little lost at why you want the system to be strictly devoted to chat. Almost any of these packages are much more configurable these days, and you can set them up to be almost entirely chat-centric without using any of the other bells and whistles if you don't need or want them.

Jack Rickard

◆◆◆

Dear Jack,

I'll get right to the point. In response to a letter from Jim Bogart (JimNJ@aol.com) you wrote: "That said, I've always thought C was for girls."

What the hell does that mean? Being a female and a computer user for many years I take offense to that comment. In the future I suggest that you keep your sexism in check while engaging in feeble attempts of humor in such a public forum.

Sincerely,

Kim Long
siberia@usis.com

◆◆◆

Kim:

If you don't know what it means, how can you possibly take offense to it? Nonetheless, the bet was 7 to 5 that someone would. Thanks to your message, I won - so we eat Chinese today. My sexism is of course mine to do with as I like.

Are you saying you think C is NOT for girls?

Jack Rickard

◆◆◆

Dear Jack

I intended to send this to your e-mail address but as I was looking it up I started rereading the "humble opinion" section and couldn't help but send this to that address. I find most letters sections full of two sentence banalities of praise or complaint without any editorial response. Not the case with Boardwatch-it is a highlight of every issue. Keep it up.

This does go in the praise drawer. We want to thank Brian Gallagher for his nice article about our PCTravel air reservation and ticketing service in the July issue. (I am sure it is the primary reason he was promoted to Assistant Editor.) The response from Boadwatch readers around the country has been excellent. Thank you.

We decided to make a substantial investment in the online future as a result of ONE BBSCON 93 and chose to exhibit at this year's show as a "kick the tires" effort. We thought there would be interest on the part of the BBS community for travel service content for their boards, but not to the significant level we encountered at the show. We are now redirecting a substantial portion of our marketing efforts to focus specifically on BBSs and are installing full T1 lines for Internet connectivity based on the board's volume. Very exciting.

I was also most impressed with the organization and professionalism of Peg Coniglio and her staff. Having done shows for longer than I care to remember you always look for organization and friendly help when needed. ONE BBSCON had plenty of both.

Making certain I go over the two sentence limit, I couldn't help but notice the energy, enthusiasm and excitement of the attendees. As a "traditional" corporate business that believes online today is where computer hardware was 20 years ago and PC software 10 years ago, ONE BBSCON certainly validates that choice.

Thank you.

David Lea
Director of Marketing
PCTravel

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David:

Very pleased to hear of your positive experience. For me, that energy and enthusiasm are the whole point. I went to Interop the next month to see thousands of people in suits busy "being there" and wishing they could go home now. It was pathetic by contrast.

Peg is indeed goddess of ONE BBSCON and we've heard from most of the vendors and many of the attendees to that effect. So I guess we'll give her another year to try to get it right.

Good luck in the online travel business.

Jack Rickard

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Dear Jack,

First I would like to say that you have done what no other magazine editor has been able to previously do....get me to respond in the form of a letter. Most of my "editorials" are confined to the form of messages on BBS's.

The reason for my response is twofold. It was first spawned by your coverage of and comments about Tony Davis. The second reason was what I have been seeing on national television. Although the Tony Davis case was local, it is a symptom of what we are seeing on almost every level of government. We are no longer a government "of, by, and for" the people. We are becoming a people who are here to serve government. To grow in power, government is reducing our constitutionally guaranteed rights to a minimum. I have seen a number of television news programs that have dedicated time to blasting computer BBS's for having digital porn pictures, although this "problem" seems to be minimal and so far I can't see where it has harmed anyone (other than Tony Davis etc.). It seems that there is a new news media offensive. Last week I saw a teaser for one of the news programs (I didn't catch which one....Nightline, NOW Dateline or whatever) where they showed a kid blowing up a mailbox, and then showing text on a computer screen. I had to assume that it was going to be a program covering anarchy files on a BBS.

Contrary to what you said in a response in the September Boardwatch, where you commented on government's motives, I don't feel that the problem is totally economic. The problem is not anarchy files or GIF's. It is the concept of unrestricted BBS's and the ability to get on a soapbox. The media (and government) is going after BBS's under the guise of making us safer. I suspect a more sinister agenda. You can't get on a horse and ride through the whole country yelling "the

British are coming!" anymore. The country is too big. You however can get on a BBS and digitally expose government abuses to a large number of people.

That has to scare a number of policrooks, and so they are looking for ways to discredit, and I suspect control BBS's. I should add that anarchy information (the construction of bombs and weapons) can be found in most libraries, and "porn" (called art) can be found in libraries and art galeries. If these things are freely available to everyone in a place where there isn't also an open forum, such as a library or art galery, why then are BBS's being targeted, other than that they also provide a soapbox?

This started as a case of one person being arrested for distribution of porn. Maybe I am being paranoid, but maybe this is the tip of a very large and scary iceberg. Maybe Paul Revere was viewed as being paranoid too.

Don Zandstra

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Don:

Yes, that seems to be the gig. The government is denied the ability to infringe on our right to keep and bear arms, except of course effective arms which any loon can tell SHOULD be regulated, or our right to free speech, except of course effective free speech, which again, common sense dictates must be under the control of government.

Democracy was a brash idea 200 years ago, and I'm afraid it still is. A free press at the time consisted of printed matter, and ours is relatively free yet today. But EVERY other communications medium I can think of introduced since then, telephone, television, radio, etc., has been heavily regulated by our government on a broad front. I can effectively make the case that technology itself has been set back 30 years by the "regulation" of television and radio for example, and both have also suffered content restriction.

The online community, by its grass roots nature, tends to be difficult to regulate in this manner. But as I type this, Congress has already thrown the FBI's onerous wiretap bill into the Suspension basket with about 50 other things that will be passed en masse without debate in a congressional maneuver which should technically be considered a crime of treason whatever is in the bills. And I think we'll see more of it in the future.

I would like to think this is just a case of honest men differing on principle, but my few encounters with these law enforcement people lead me to believe that they truly are horrendously evil and repulsive creatures no better than the pedophiles they constantly use as an example to justify their own activities.

So unless and until a sufficient number of citizens gather to stomp out these ugly little trolls, they must live under the jack-booted heel.

Jack Rickard

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Jack:

I frequently write you, asking for either advice or simple inspiration. I don't believe, however, that I have ever taken the time to acknowledge you and your staff for the outstanding piece of work you produce each month, Boardwatch Magazine. I think John D. put it best, Boardwatch is `A gem of a resource!'

I would like to inform you of my recent efforts to expand my academic horizons on the greatly hyped "Information Superhighway. ''

I began my foray into the world of modem communications nearly two years ago. I still remember the first connection my `Best Data' modem made. It was to `The Sierra Network' (now INN), and as most first-timers will tell you, it wasn't long after the three hundred dollar plus phone bill arrived that I began looking for a cheaper alternative. Of course, bulletin boards were the answer.

My location did pose a problem. I currently reside in the country town of Willits, a `hole-in-the-earth' (if you will) about thirty miles off the Northern California coast. The population of this town, a little over 5000 citizens, made it a little difficult to "get on-line" locally. As a matter of fact, there simply were no BBSs to call. With my interest peaked, I decided that I would be the first to start one. For a brief stint of two months, I ran a small single line system, "Radical On-Line", using Adam Hudson's ` Quick BBS ' software. I was even THIS close to getting on the then highly regarded FidoNet when a previous on-line endeavor came back to haunt me, with my parents quickly pulling the plug on both my modem and my computer. I won't go into detail about the incident, but it is something I regreted doing then and have ever since. Alas, with that behind me, I decided to take a break from on-line communications.

For a little over a year, I remained off-line. Actually, it may have been for the better, as it gave me time to pursue other interests - weight lifting, running, baseball, and, of course, women. Late late summer, though, the bug bit again. This time I was more interested in being a caller than a sysop, and some locals had opened up a few boards of their own. Finally, a place to call!

All the while I continued to read the success stories in Boardwatch, and told myself `That could be you!' I even purchased an Internet account, full access mind you, and I believe it was the Internet that prompted my latest and most exciting move.

Two months ago, after much discussion with my parents and my grandparents, I decided to go `all out' and create the system of my dreams. Thus, SataComm was born. I have even formed a company to support it, Donahue Communications. The system is a "pay-for-usage" setup, and I am overjoyed to have proven those local sysops, who said there wasn't enough interest to get a pay system off the ground, dead wrong. The system is indeed beginning to profit, this early in development, with a large handful of subscribers.

SataComm is operated by yours truly, not as a BBS, but as an on-line service. My subscribers, believe it or not, are not your typical modem users. They are the Prodigy, AOL, CompuServe crowd who want the Internet connectivity, the USENET News, but without the LD charges we face. I charge twenty dollars per month for twenty hours, and you get it all for that price. Longer subscriptions cost less, so it's to your advantage to buy more time. I am using TBBS, and PIMP 3.x (thanks), along with some other additions. My more exciting project: full IP connection. I am working with a local (semi-local) Internet provider to bring 56k access to the system. I hope CIX doesn't screw that up. Basically, the future looks bright.

I just wanted to let you, and possibly your readers, know that there are a bundle of people out there, waiting for a cheaper alternative. You just have to go and and GET them. If the figures are true, and some 10 million people have modems, think of how many have yet to venture into the BBS marketplace. With some good marketing, a smart business plan, these people could be YOUR next subscribers. Good customer service make the difference. Show them that you care, help them install their first modem, make their first call. Go out of your way to please them, and they'll usually come back. Loyalty even has a place on the highway.

The first day of my Senior year in high school was yesterday. Though currently 17, by the time of the next `CON I will be 18, and will definately be attending. I hope to see you there, Jack. And if my dreams hold true, M.I.T. also awaits. I'll keep you informed as to when SataComm will be `telnetable'.

Adam Donahue
President, Donahue Communications
adam.donahue@satacomm.com

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Adam:

With but a handful of people such as yourself, we can connect and remake the world. The only advice I would offer is that dreams hold true to those who hold true to their dreams. Every success to SataComm and your mission to MIT.

Jack Rickard

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TELEPHONE STUFF

MCI Communications has announced their intention to offer local telephone service in five states, including Michigan, Illinois, Maryland, Pennsylvania, and Washington. The company believes by offering local service, they can cut the cost of their long distance services as well. And they may well be right. Some **45%** of the cost of a long distance telephone call goes to access fees to the local telephone companies - some **$21 billion** per year actually. In California, Governor Pete Wilson has signed legislation allowing cable tv companies to offer local telephone service.

MCI is also rumored to be ready to offer Internet connections starting December 1, 1994.

A single fiber optic cable can currently handle some 32,000 simultaneous telephone calls.

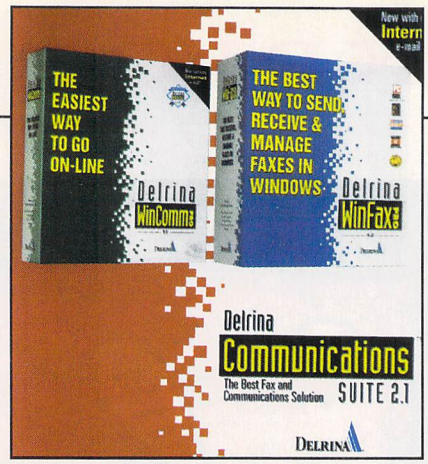
The FCC has released a staff report titled Long Distance Market Shares: Second Quarter, 1994, which summarizes interstate calling with regards to market share calculated in "switched access minutes." It notes AT&T had an **80%** market share in late 1984 which by the second quarter of 1994 had declined to **59%**. The full report is available from the FCC-State Link BBS at **(202)632-1361** in the file MKSH2Q94.ZIP.

Bell Atlantic has apparently decided to make a serious move toward developing their own commercial online service. In October they signed Michael Greenbaum, then General Manager of Communication Services for Prodigy, as their new Vice President of Business Development. His charter is to make them a BBS operator in a big way. Greenbaum was the strong advocate behind Prodigy's new Internet connections, and the "chat stadium" concept Prodigy plans to introduce soon. Chat stadiums will purportedly allow up to 20,000 callers to chat simultaneously.

COMPUTER TELEVISION

As of September 6, Jones Computer Network, a cable tv network offering a series of generally gruesome tv shows about personal computer technology, has expanded in a move to become a significant cable tv channel network with some 20 cities and over a million households at launch. JCN continues an affiliation with Mind Expansion University (MEU), but is expanding to provide their own network with 24 hour computer coverage.

Planet Systems has made some headway offering a low cost satellite dish to BBS operators that



Delrina Communications Suite 2.1

allows them to receive Fidonet Echomail conferences, USENET News Groups, weather image information, and other data via satellite. They've actually signed up six or seven hundred of these systems with an initial cost of **$495** for equipment and a **$30** monthly charge.

More recently, the company has started a monthly television show about electronic bulletin boards and communication technology. Joe Overholt and Johnny Green make a pretty entertaining pair and cover items specific to the BBS community, and the show has caught on a bit. It is transmitted via satellite currently and only available to dish owners who tune into Galaxy IV satellite, horizontal polarity and usually on channel 7, at 9:00 pm EST on the last Wednesday of each month. This is the same bird that the data moves on, and with a signal splitter and video receiver (roughly $150), the satellite connected sysops can also watch some television.

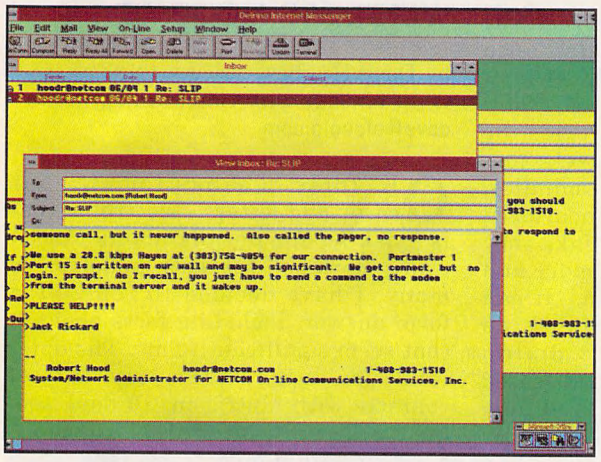
The show has done well enough that many people who don't receive satellite programming have started to request it. So the company has started a very innovative program Overholt calls a "tape loop." The company keeps a list of subscribers to the show, and each month mails videocassettes to about 1/4 of them. The tape comes complete with a series of mailing labels. After you watch the show, you're supposed to mail it on to the next person in the loop using one of the included labels. There is no cost to join the loop, but you do have to pay postage to the next person, and if you fail to send it on, you're dropped from the program. A tv mailing list using snail mail. Planet Systems, 1065 Cosby Highway, Newport TN 37821; **(615)623-8300** voice; **(615)623-8751** fax; **(615)623-8111** BBS.

DELRINA RELEASES COMMUNICATIONS SUITE WITH INTERNET MAIL MANAGER

Delrina Corporation offers a great example of what's going on in software today. While major league databases, programming languages,

and even office suites have seen incredible pressures on price and margin, communications software has been doing well. Further, we are now in one of those industry doldrum periods where all the pundits predict the end of innovation, no room for the little guy, the end of opportunity, and dark and foreboding warnings that it is all different now. These usually just precede the next innovation boom.

Delrina happened on the market with a software program that could not even possibly exist more than 3 years ago. Taking advantage of the new modems that included fax capability, they introduced a product titled WinFax. It allowed you to send documents to any fax machine from in Windows. But more than that, they very cunningly cast it as a printer driver under Windows. What this meant was that from Microsoft Word, or Excel, or Word Perfect, or any page layout program, without ANY coordination with that program itself, you could fax pages or documents anywhere just by PRINTING them to the Winfax print driver. It worked for them. They've sold some 4 MILLION copies of the program.

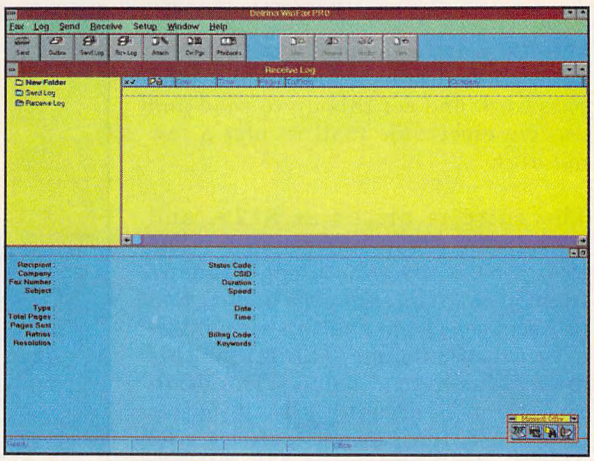


Delrina Communications Suite Internet Mail Manager

This month, they introduced version 2.1 of what they are now calling their communications suite. It includes version 4.0 of WinFax Pro, Version 1.1 of their terminal program WinComm Pro, and the Internet Mail Manager.

WinFax Pro has grown to include optical character recognition on received faxes, a tie to Delrina's broadcast fax service, a serious cover page designer, and more bells and whistles than the application really calls for frankly. But it is undoubtedly THE fax program for use on the IBM PC platform.

WinComm Pro is relatively new, and it's a comm program. Features are standard file transfer protocols, although they do include HyperProtocol which they claim is more efficient than ZModem, and HyperGuard, a program that scans all downloaded files for the signatures of 300 known and common virus programs on the fly - kind of an interesting aspect. It displays GIF images as they download, and we found it very easy to learn to use. But what WinComm Pro does best is come with preconfigured scripts for CompuServe, BIX, MCI Mail, AT&T Mail, Delphi, and nearly a dozen other online services. We've had mixed results with such scripts in other programs. Obviously, some tailoring is required for logon names and ids, and users can often get mired down in the tailoring process itself. In other words, they rarely work right out of the box. But Delrina has made a very strong showing here by developing standardized scripts with very clear prompts for the required logon id, password, etc.



Delrina WinFax Pro, Cornerstone of Communications Suite 2.1

The most innovative feature of the new package is an Internet Mail Manager. This does NOT require SLIP, an Internet IP connection, or even a UUCP host account. It works with the UNIX shell accounts that the very newest to the Internet are likely to encounter as their first experience. You dial a modem pool, logon, and get a UNIX command prompt as your reward. And the Internet Mail Manager automatically coordinates a local mail program with the mail files on the UNIX system shell account.

We have seen this approach a time or two before, and always asked "why." Why not just use UUCP like UNIX often does to pass mail and newsgroups automatically via a dialup? But after seeing the Delrina effort we get it. There is little to configure and little to coordinate with the host. You have a shell account with a logon name and a password, or you don't. Period.

Better, Delrina has carried the same scripting process over to the Internet Mail Manager in a startling fashion. You can write your own script, and the program does offer a terminal mode allowing you to walk it through and see what's happening. But most of us won't need it. It comes with a list of preconfigured systems that even include their telephone numbers, and the list has dozens of existing providers already on it. We happened to have somewhat dormant accounts on Colorado SuperNet and Netcom. Incredibly, we found both listed on the list. Simply select them, check the phone number listed as the primary to make sure it is your local shot, and add your logon name and password in the little box on screen. While delighted, I still had no hope it would actually work. IT DID. Flawlessly. The system dialed Netcom, and downloaded two messages that were in the mailbox (I hadn't checked in weeks), and uploaded three test messages we had put together.

The program has icons for checking the inbox and outbox. You can attach file attachments as UUENCODED text, or even as MIME compatible Base64 coded attachments. We've just never seen an offline mail program for the Internet that required so little configuration, and had all the right buttons in all the right places. It doesn't do newsgroups - this is just a basic mail manager for e-mail, but it does it impressively well. We actually think

a complete novice could get an account with someone like Netcom, get a phone number, logon name, and password, and set this up to send and receive electronic mail in just a few minutes.

The suite is priced at **$129**, and considering the dominance of WinFax Pro, a basically functional Windows terminal program with a good protocol selection, and this very interesting Internet mail function, this program is a good value. The documentation is actually a little better than most, the product features a 60 day money-back guarantee. A full installation requires 17 MB of disk real estate, and 4 MB of RAM. Delrina, 895 Don Mills Road, 500-2 Park Centre, Toronto, Ontario Canada M3C 1W3; **(416)441-3676** voice; **(416)441-0774** fax; **(416)441-2752** bbs.

ESOFT INTERNET/BBS CONNECTIVITY CLASSES

eSoft, Inc. has been quietly beta testing their Internet Protocol Adapter (IPAD) with a number of BBS systems, and gathering information about the learning curve many BBS operators face in providing Internet services to BBS callers. We've done little to hide our enthusiasm for this product from the beginning, and in fact have been a little free with our never ending advice on what ought to be in it.

IPAD will ship WITH hardware initially, a small grey-green baby AT case, very small footprint keyboard, color monitor, with a 486-66MHz motherboard and a V.35 interface card allowing direct connection to a CSU/DSU (customer service unit/digital service unit - essentially a modem for T1 connections), two ethernet network interface cards, and either an eight or sixteen port Digiboard multi-serial port card.

IPAD will act as a terminal server, ftp server, domain name service, full TCP/IP router, Web server, finger server, SMTP (Simple Mail Transport Protocol) client and server, NNTP (Net News Transport Protocol) client and server, and a few other things as well. Rumor has it that it will be the ONLY device aside from a Cisco router certified by Sprint for direct connection to their backbone. It should work with any BBS, and in fact, Kevin Behrens of Aquila BBS in Chicago is already running one with

his 40-line PCBoard system (telnet aquila.com) on a full T1 connection to the Sprint backbone.

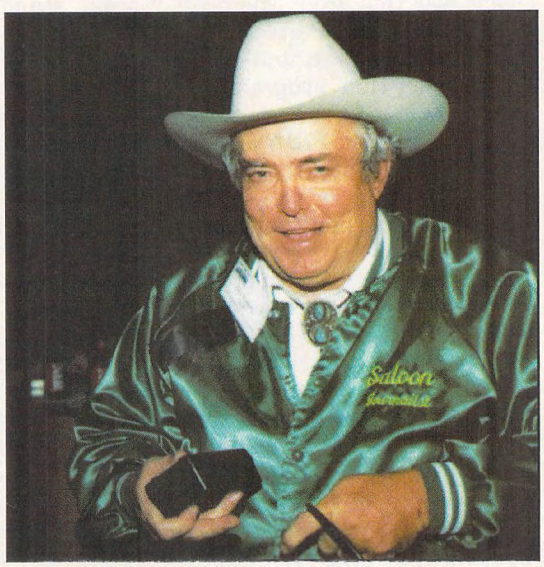
As such, it almost reaches beyond the BBS community. IPAD runs on a DOS machine, has no UNIX component, and replaces scads of hardware and software necessary to provide the same function in one relatively tiny case. It can be configured in minutes, and by supplying it on a standardized hardware platform, eSoft thinks they can reduce the product support and installation to the minimum. It can work with a simple Serial Line Internet Protocol (SLIP) dialup connection, a dedicated 56 KB leased line, or a 1.544 Mbps T1 leased line. The multiport serial cards can either be used for terminal connections to a BBS via null modem serial cables, or used to connect modems directly to provide SLIP or PPP (point to point protocol) access to callers. So we would expect to see some serious interest from small work groups and offices that don't even run a BBS in using this device to connect their office LANs to the Internet without the usual routers, UNIX systems, and assorted complexities involved in same. The device with both hardware and software included will be priced at $4000-$5000 dollars depending on the precise configuration, and may represent the simplest and least expensive connection to the Internet available at this point.

The IPAD demonstration at ONE BBSCON was one of the highlights of the conference, and closed to a standing ovation. But it was also an eye-opener for eSoft head Phil Becker, and he's learned more from the beta sites running it that there IS a learning curve. So the company is planning on holding a two day dedicated seminar in Denver on a monthly basis. The seminar will be a very hands on affair to provide a workshop for any BBS operator to learn what connecting to the Internet looks like, feels like, and works like up close - a seriously expanded version of the IPAD session at ONE BBSCON in some ways. The two day classes will be priced at **$295**, and is NOT limited to eSoft customers - anyone can attend. eSoft, Inc., 15,200 East Girard Ave, Suite 3000, Aurora, CO. **(303)699-6565** voice; **(303)699-8222** BBS (**telnet esoft.com**).

METRICOM'S "RICOCHET" WIRELESS MODEMS

by Dave Hughes
Old Colorado City Communications
dave@oldcolo.com

OK, folks. Thanks for all your cards and letters - electronic that is - asking for details about Metricom's Ricochet wireless modems. So many, I have decided to reply by a form answer, including facts about it that seem significant to me. The opinions are mine, from my initial contacts with Metricom, 10 days ago, both sales and technical support, some private e-mail to persons using rented devices for access to the Internet via Metricom's "MicroCellular Data Network" (MCDN) in the



Dave Hughes, wrangling wireless modems

Gain from our expertise.SM

✔ Unmatched Experience

We are a full-service, professional company that specializes in telecommunications hardware and software, Bulletin Board Systems and related applications. For over eleven years, we've been setting up bulletin boards for customers all over the world. We also run an award-winning BBS in Atlanta which has grown from a single-line system to the largest system in the state of Georgia with 40 telephone lines and thousands of satisfied users.

✔ Turnkey Solutions

In addition to selling the software and hardware components necessary to let you put your own system online, we have the ability to provide our customers with total turn-key systems. We have several programmers available to transform your ideas into realities quickly and at very reasonable rates.

Our customers range from the single-line hobbyist BBS system to corporate users running very large online applications. In addition to handling customers all over the United States, we are experienced in working with customers overseas, or wherever phone lines can be found.

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The BBS industry is undergoing tremendous growth and is rapidly changing. It is our goal to provide our customers with professional, economical, and sensible solutions to their communications needs as we provide them with the best software and hardware in the industry.

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- ❒ Application Generation
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- ❒ ISDN Installation and Support
- ❒ Internet Connectivity for BBS and Local Area Networks

Customer Service

Each time we see one of our customers put a BBS online, the excitement grows. I hope that you will give us an opportunity to help supply you with your hardware and software. If you have any questions about bulletin boards, I encourage you to pick up the phone and give us a call.

Rodney A. Albia
President

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Bay Area, my purchase, review of the documentation, and then use of a pair of the little hummers for a couple days. So this is not an extensive review, for I have not had the time to put them intensively through all their paces as I will, or tried all their extensive features (an amazingly long list). But It is an all-important "first impressions" by a very modem (and even packet-radio licenced) experienced telecommunicator after spending **$1,018.90** (two Richocet's two extra cables, FedEx shipping), out of my personal pocket, which marvelously focuses the mind when first buying a new technology.

Metricom
980 University Ave
Los Gatos, CA 95030
Tel **408-399-8200**
Fax **408-354-1024**
Customer Support **1-800-556-6123**
info@metricom.com

For those wanting to go to the heart of the matter and buy a pair, I suggest contacting Coleen Murphy, whose direct extension is **408-399-8143**. I first asked her buying questions, then technical questions she couldn't answer, even asked her to send me documents, wherupon she gave me a technician, and copied the manual and mailed it. Disappointing. Their manual is far more a dummied down consumer manual, without the usual "technical appendecies" we are used to in modems. However, when the pair arrived, it included a 34 page "Programmers Guide" which is far more useful to the technically adept and essential for those using the devices outside the MCDN network - where things are far more "consumer transparent,"-which is one of the strengths of Metricom's design of the modems and ergonomic approach to the consumer.

They **really** are "plug and play" devices for anyone in the area of their network. Any dummy can get one going immediately.

Because Metricom appears to be far more focused on creating wireless networks in cities, than be a retailer of wireless modems, I think sales of modems is very much, at least now, a "side" business to their main one, of building telco-bypass city digital wireless networks. But since a modem is a modem and pairs, or even small networks of Richochet's, there are uses to which they can be put, and places they can be used where no city-MCDN will ever go, which push the envelope, and are rooted in the nature and potential of FCC Part 15, spread spectrum (902-928 mhz) no-license radio - which I think, and hope, will be a hell of a competitor to Telcos (whether wired or cellular), LANS, and Cable TV, interactive or not.

For those, like myself, who are not in an MCDN area, and want to use the devices for a variety of purposes, the need for detail is greater. Uses such as:

- A "travelling pair" for demonstration, or connecting from a podium/conference site or classroom to the nearest outside-line phone through a conventional dial up modem, as a wireless "extension" from the end of phone lines.

- A base station on one of our HiCom systems (which are themselves connected to a network) for end users not economically connectable by wire through walls or close buildings, by serial cable or LAN.

- A pretty fast (77kb) PPP connection **between** one of our HiCom (OS2, TCP/IP, Lora BBS) systems and the nearest close-range server, so multiple end users can "share" the bandwidth to the Internet.

THE PHYSICAL MODEMS

A Ricochet modem is a little less than 8 inches long, 2 inches wide, and 3/4 of an inch deep. Half the body is taken up by a 6 hour battery. There is a very small and light 9 volt DC output wall transformer with typical power plug and 6 feet of cord.

A 4 inch rubber duck antenna lies flush against the case, covering the on-off switch (nice design), which can pop up to various positions. The modem can lie flat, or stand on end, taking up very little space.

There is one green light - from which, in rather involved "codes" of blinking - all intelligence about the state of the modem can be deduced.

The switch has three postions, off, and on-with beep sound, and on-without. A nice touch because whoever designed the thing was very conscious of it's potentially being used with laptops in circumstances where noise or flashing lights could be annoying. But also, so sparse of audible or visual information, that experienced telecommers might be uncertain what is going on. Again, it more reflects being designed for use in a network where it either works or it doesn't. Not a ham radio operators, or even 28.8 modem flashing status light with on-off sound, gadget. It's externally designed for executives, not hackers.

The whole thing is really quite small and light. Much smaller than most external modems, and so light that it can be carried in one's laptop case. And so nicely designed it reminds me of Swedish or Danish ergonomics.

There is an RJ45 (one of those snap in-out connectors which looks like an adult RJ11, with 8, rather than 4 brass connections inside). If there is any weakness, it is the design of that connector, to which a short (too short?) 16 inch serial cable is attached.

You can order a Ricochet with either a Mac cable or a 9 Pin PC cable which simply goes in the modem serial port of either machine. Apparently completely standard connectors. One comes with the price of a modem. Extras are $9.00. I ordered 2 PC and 2 Mac cables so I could cover all bets. (And immediately on delivery operated one modem on a Mac LC and the other on a Laptop PC.)

My comment about being too short comes from my setting the first modem next to the Mac. When I turned it on, the RF emissions caused distortion on the Mac screen. When I put the modem on top of the Mac monitor the distortion stopped. So placement, as in all radios is important. But since the end-connectors are standard, one could probably put standard serial cable as an extender, so the modem can sit at a distance from the computer - which might be needed in marginal radio-reception circumstances. I kept wanting to put the modem at least 3 feet away from the computer in some handy place, but couldn't.

So the serial end of things - RJ45, and 9 pin or Mac Din pin are standard, not proprietary.

But the connector for the antenna is not standard. Wierd even. A knowledgable source told me that the FCC, requires manufacturers NOT to use standard antenna connectors. Apparently they are getting really worried

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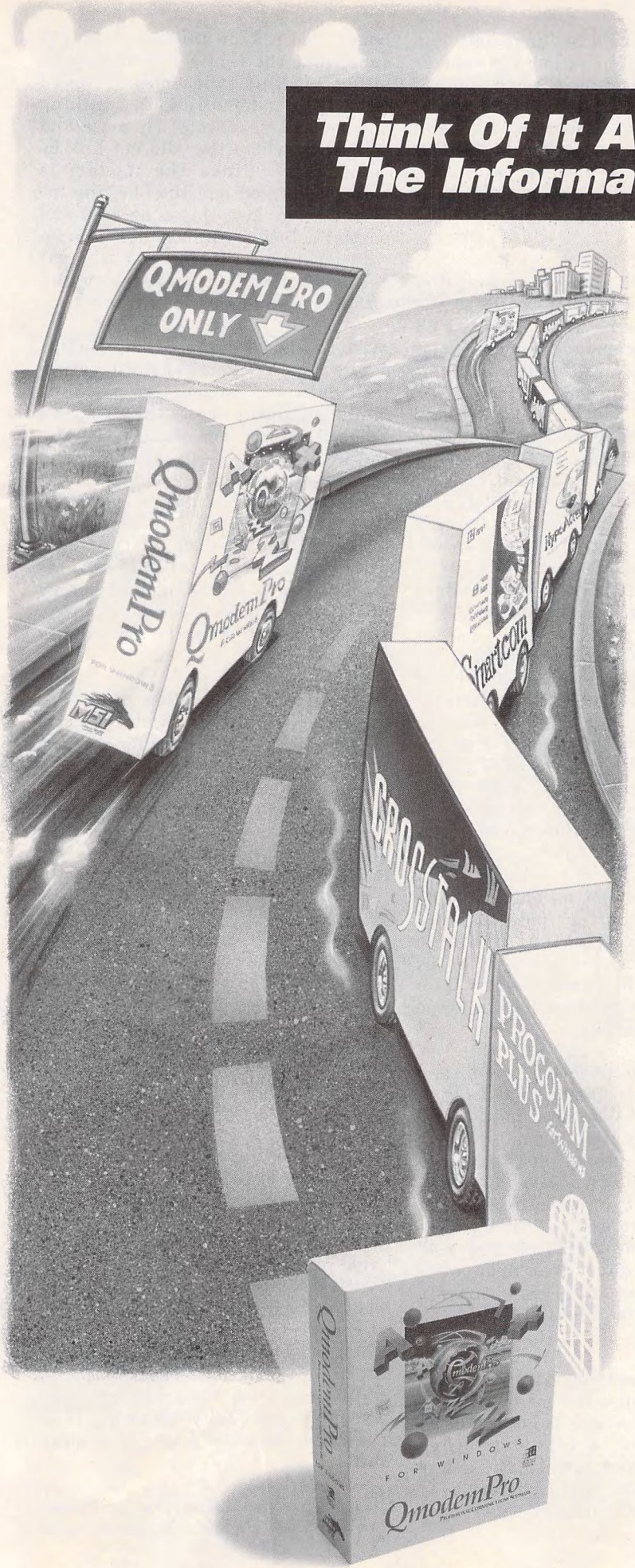

QmodemPro for Windows by Mustang Software zooms past the competition. With no roadblocks in sight. This feature-filled, power-packed communications software makes it easy for Windows users to dial into BBS systems. It's the first program to support both data and fax communications from a single phonebook. With a modem that supports adaptive answering, you can receive both fax and data calls while in Host Mode, a limited-feature BBS program that lets you set up your PC to receive incoming modem calls. You can also send a fax directly from any Windows application using the QmodemPro for Windows printer driver. It's easy. It's all in one integrated package. And it's available now.

QmodemPro for Windows is the first Windows product to support RIPscrip graphics, so you can plug into the thousands of BBSs offering graphics and full mouse support online. It also has more than 30 of the most popular terminal emulations, 10 built-in file transfer protocols including Zmodem, CIS B+ and Kermit, plus up to 40 programmable macro buttons. QmodemPro for Windows also lets you associate icons to each entry in your dialing directory, so you can create a true Windows phonebook. Each phonebook entry tracks up to 5 numbers, and groups of entries can be saved and dialed.

With QmodemPro for Windows, file transfers are made easy with features like drag-and-drop uploads from the Windows File Manager and live .GIF file viewing during downloads. The built-in .GIF viewer lets you zoom .GIF and .BMP files, or mark and copy portions of the picture to the Windows clipboard. You can put the Windows multitasking environment to work: use it to transfer files in the background while you work in your word processor or spreadsheet applications, or get in a few quick games of Solitaire. No other communications software does Windows like QmodemPro.

QmodemPro's new script language, SLIQ, gives you unparalleled power, speed and flexibility. With the AutoLearn feature, you can let QmodemPro record your scripts automatically without having to learn how to program. SLIQ scripts are compiled for fast, secure operation, plus we include a powerful script debugger and text editor.

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that these Part 15 devices, which can emit no more than 1 Watt - which this Ricochet does - is going to be attached to fancy Yagi, roof top antennas, to increase the range from the informally rated 1,500 feet. Perfectly legal as far as I know. But discouraged by design.

So the antenna, which I was able to remove by gently pulling on its base, is connected by a little metal ring that is pressure-gripped by two spring-brass blades inside a small round opening. Sliding a paper clip in here, I went hacking around trying to see what would happen if I connected it to an outside antenna to get more range. (At first nothing happened.)

But one glance at the tiny 4 inch antenna tells you the modems are not going to communicate to McMurdo Sound. More on this later.

Each modem has a unique "address"of the form 0000-0XXX, which is printed on the end of the modem. This address is the way one modem can be told to connect to another specific modem.

A small manual completes what the user would carry around with him in a laptop bag. All in all, the physical device, connectors, and manual are extremely well done, deceptively light and small (for all the eprommed goodies inside), and unobtrusive in the most polite society. Really a "designer modem."

MODEM OPERATION

The other striking thing about the Ricochets - which set them completely apart from Ham or Business packet radio heritage - is that they are operated almost entirely by the phone-modem familiar Hayes AT and S-Register command set. One does not command "CONNECT XYZ" on the keyboard, but "ATDT 0000-0XXX" upon which, if the modem connects to the target modem, 'CONNECT' appears. Not only familiar to those, like myself, who operate modems by manual command more than not, but also taking advantage of all popular terminal programs' ability to be programmed to operate phone-dial modems.

Some future technology historians are going to puzzle over why the command "AT" (attention modem) is followed by "DT" (dial, touch tone), where nothing is really being "dialed" by radio, in a wireless modem. But the decision was a brilliant one. For the modem, its operation and control were designed to look, to computers as well as users, like any phone-dial modem. So the "transition" from the wired to the wireless world for the end user is a seamless one, even though on many counts, it is quite revolutionary, and technologically different.

There are 16 AT commands, from dial and hang up, to AT&W writes to the non-volatile ram. And I counted 28 "S-register" commands, some modem-like, and many radio-specific, and unfamiliar.

The modems autobaud, so when one hooks up, and does an AT, getting back OK, the modem has set itself at whatever speed, from 1200 baud to 115,000, your terminal program orders. And it remembers the speed, between uses. So an "ATS304?" command will report the modem speed that was last commanded.

When the modem is plugged in or powered up, there are a whole set of meanings attached to blinks and beeps. From blinks every 15 seconds if the battery is charging, to a steady light if the modem does NOT detect another modem in range, but blinking and beeping (which can be turned off) when it "grabs" another modem, long before you tell it to "dial."

So to test its range, all one has to do is turn it on, battery powered, and walk or drive from out of range (steady light) until it suddenly beeps and starts blinking every two seconds, which tells you it is in range of another Ricochet.

It's a little disconcerting when one first turns on the modem (as I did in Rogers Bar) to get a steady light, until suddenly, five seconds to two minutes or more, it suddenly announces it senses another Ricochet. The closer it is, the quicker it responds. But once it links with another modem, it has it. I have used it for hours, and never dropped a connection from fade. You either are in range, or not. The light tells you so.

But when I found that sitting at home it could not sense the modem in our office through several buildings about 1/4 mile away, I tested another theory. I walked toward the other modem until the light came on, then walked away, all the way back to my house, and it kept blinking. I am not sure what the limits of this stretch might be. But twice now I moved until the modems linked, (walking outdoors for example) then walked back in to where they did not link by themselves. Since the modem is battery powered and the blinking led is the yes-no key, this is an easy and partial solution to marginal, temporary locations. Like all line-of sight radios, a few feet either way can establish communications, or not.

Matter of fact I did just that, walking across Bancroft Park where the green light started every two seconds blinking halfway across the park, as I headed from my house to La Baguette, the upscale French Bakery/Restaurant in Old Colorado City, from where I have never been able to log on from by phone because putting RJ11 outlets on the walls would be a little too declasse. This morning I was able to log on from my new designer wireless modem and am sure this will change my eating habits.

When connected, the flow of data to my screen is a little sporadic - typical of try-retry error correcting modems. It does take some getting used to.

I still haven't made any end-to-end speed tests.

RANGE?

Ah! The $64 question, always. Metricom says (orally, not in writing) that a pair will operate up to about 1,500 feet apart. Depending on walls, etc.

But like all line of sight radio, it is the line, plus the power, and the most important factor of all, the antenna that determine this elusive variable.

Part 15 FCC wireless devices are limited to 1 watt radiated power. Even though, as Gordon Cook points out in his excellent Special Wireless Report from original sources dating back to 1980 and the FCC's NOI (Notice of Inquiry), the FCC was ready, after comment by the public, to let the power rise to 75 watts. THAT would solve all our range problems. But between the big Corporate Radio companies, like Motorola, and the government security agencies, they hammered back the power to 1 puny watt.

BUT with the right antennas, companies such as Tetherless Access, and

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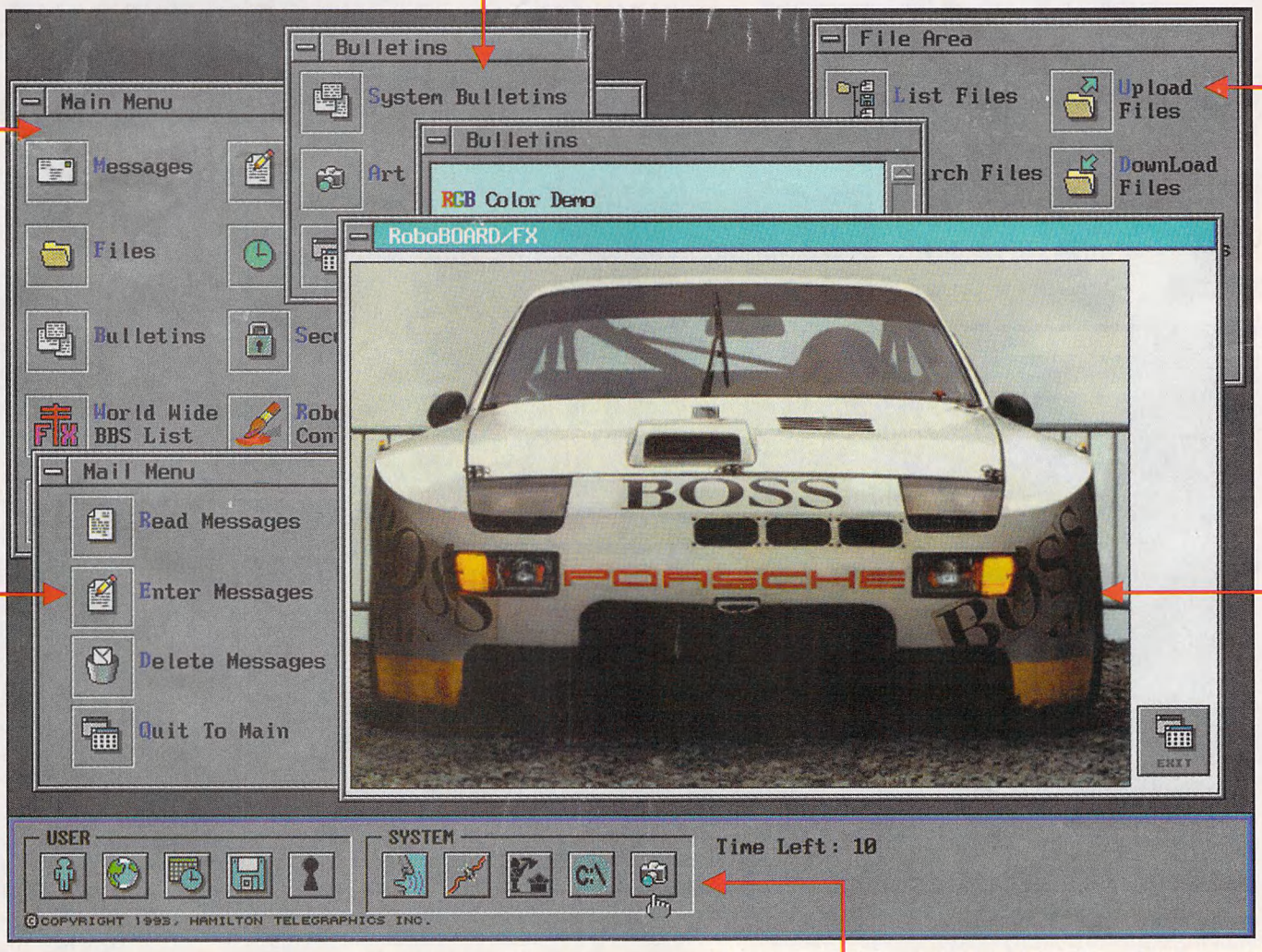

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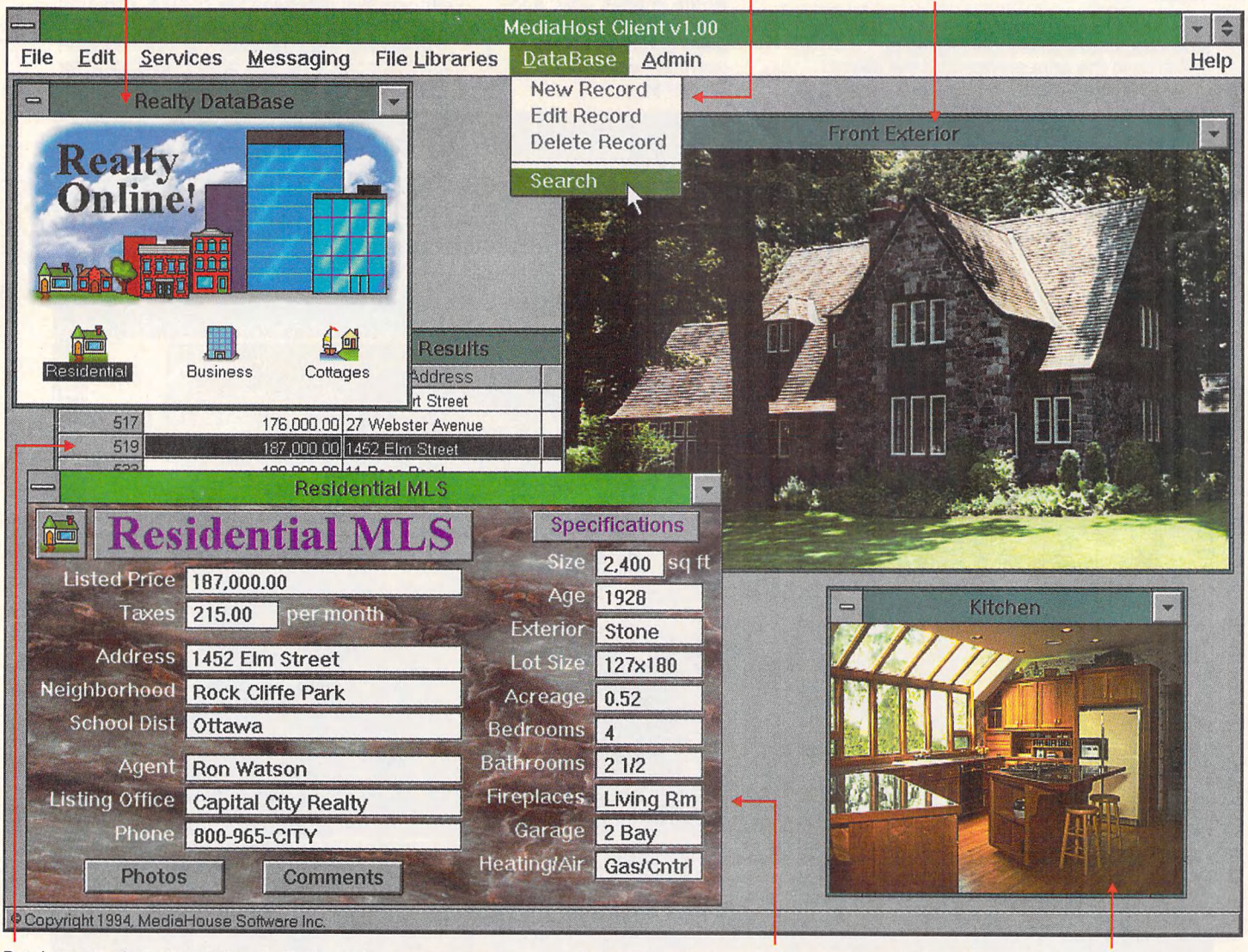

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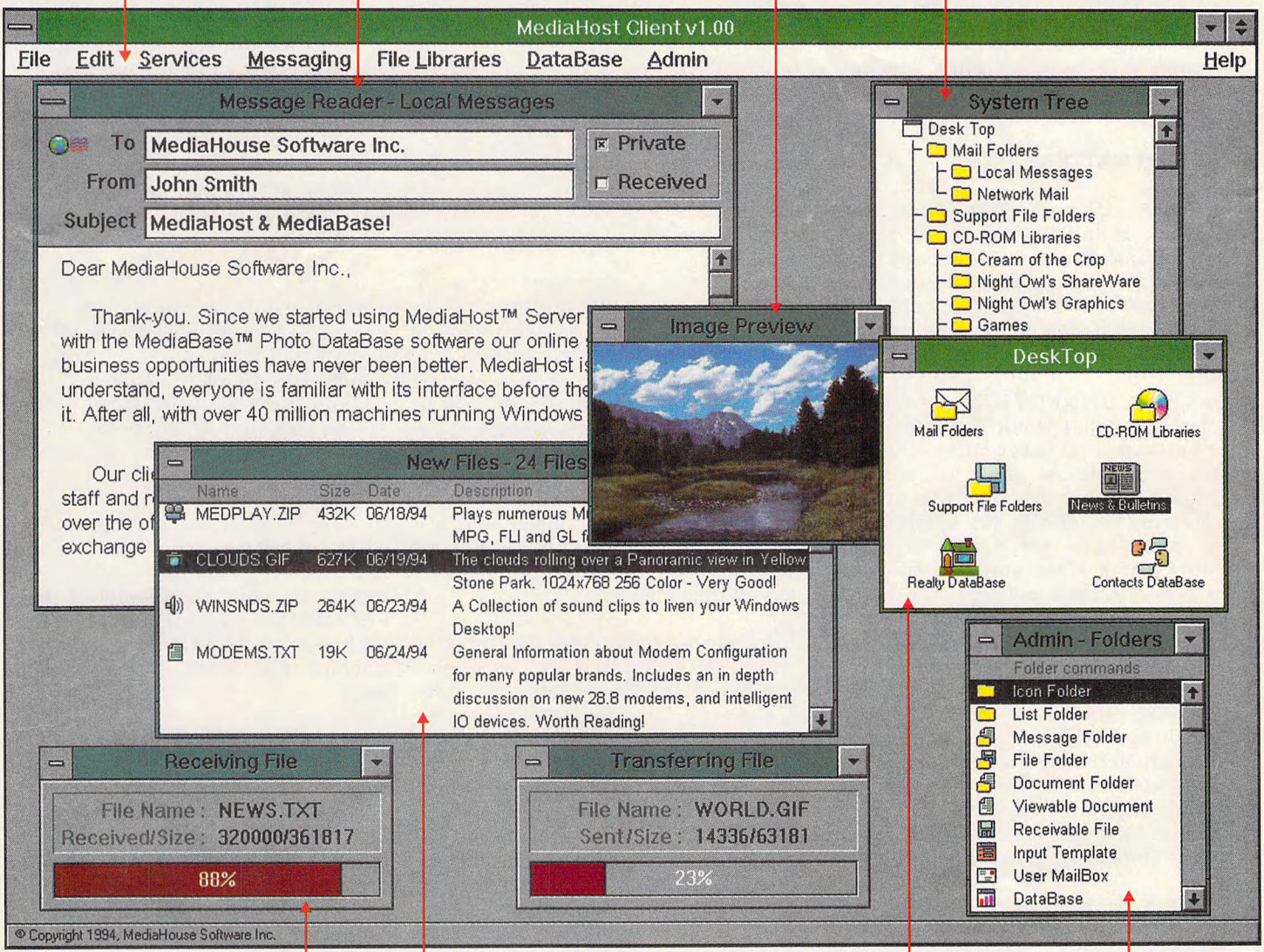

Upload and download concurrently while maintaining full use of system features such as chat, messaging and files.

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MediaHost blends e-mail, conferencing, and popular BBS functions together to create an Online System that goes far beyond the capabilities of conventional mail and BBS packages. MediaHost can be accessed equally as well from remote, locally or across a network allowing you to use it for internal mail, work-group communication, resource sharing or as a dial-in system. MediaHost uses an advanced bidirectional packet protocol for it's multi-tasking Client/Server that allows users to fully interact with the system and conference with other users concurrently.

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MEDIAHOST for Windows

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Cylink - both of whom make fixed-installation Part 15 devices, starting at 64kb speeds, ranges of up to 50 miles have been achieved. five, 10 and even 20 miles are achievable - with point to point, clear path, (not omni-directional) Yagi antennas.

And I am aware some Californians are putting up antennas off these little Metricom Ricochets, to get more range. How much, how far? Dunno yet. **I** sure will be experimenting.

But as delivered, the little four inch antenna is no long range solution. And Metricom does not help out with any suggested antenna solutions.

OTHER MATTERS

PRICE: OK, the list price from Metricom is $495 for one Ricochet, which includes modem, battery pack, recharger, built in four inch antenna, and either a PC or Mac cable. No case, but it can fit in a laptop case easily.

INTERCONNECTION: I was **very** worried that I would have technical challenges to interconnect one of their modems, not to a user computer, but to either an outdial modem (for making the wireless link a "patch" to a wired call), or to the ports of a Host service, like our HiCom or Unix services, via a Digiboard. But it turned out to be very straightforward. In one case simply a Null Modem Adapter added to a Modem Cable, to make it a straight-through cable. Standard RS232 stuff. Nothing fancy or hand-made. Even though Metricom does not publish the pin-outs to either their RJ45 (which I really would like to have) or their 9 pin or din serial cables - which appear to be standard.

PPP: Since this end-user modem was made to be included in Metricom's MCDN "mesh" of pole-mounted (different size) wireless modems for their network, features have been included in the firmware to work with TCP/IP, i.e. the Internet.

While I have not exercised it yet, each Ricochet supports the PPP (specifically not SLIP) IP protocol. Which reportedly will work fine with PC Windows "Chameleon" TCP/IP terminal software. Which I take to mean that if the host system to which the Ricochet modem is attached supports PPP, then the end user can be in full IP mode from his or her PC or Mac, if **they** support TCP/IP in the software.

I find that interesting, because, at 77kb bandwidth speeds, I am going to see if we can connect up a HiCom system, which itself can handle, say 16 terminal or dial in modem connections at a time, and link it to an Internet server, within 1000 feet (in another part of a building or complex, for example) by PPP and wireless, over which path should flow the same amount, at least, of simultaneous Internet user traffic, as a DSU/CSU - Router 56kb Frame Relay connection would. (i.e. use a pair of Ricochets to 'extend' moderately fast and wide IP bandwidth beyond the DSU/CSU/ Router termination point, to yet other machines within range, which themselves can handle multiple users.)

STAR MODE: I also have not been able to test the Ricochet's "Star Mode", which is "...Metricom's connectionless datagram service." i.e. a "broadcast" mode, (or two-way, if both, or many, Ricochet's are in Star Mode), which uses time segments, rather than character terminated communications. This **really** gets into the radically different world of data-radio, from data-down-pipes. Which I won't get into here. But it is suffice to say, Ricochets are more than point to point wireless modems.

So new are these modems, (Metricom's MCDN service was not announced until June, 1994), that the Programmers Guide contains a technical addition about Star Mode which contains the comments "...Knowing that StarMode is presently the most popular mode for new wireless applications..." and "...we work to be exceptionally responsive to developers using StarMode for applications ...email **george@metricom.com**.." and "This is your mode, so don't feel abashed about contributing to make it as cool as possible!"

Hey, I like their hacker, and "everyone contributes" spirit. So it may be a designer modem but not a closed fraternity.

PROBLEMS: The only problems I have had to deal with concern error-correcting transfer protocols (kermit, zmodem) through the wireless modems, and one that I didn't like that turned out to be a flaky RJ45 connector. I haven't gotten back to their techs to see how to handle binary transfers, so I won't comment yet.

But the RJ45 problem was a little more disturbing. First of all the RJ45 - which works just like a wall jack RJ11, just bigger - does not seat deeply into the case of the modem, so there is a little too much - for my blood - "play" in the connector. For those in a static place, fine. Once connected, always connected.

But those of us who travel, have to break down the set for packing, will be inserting and removing the connector many times. So it happened to me yesterday when I left Rogers Bar, dissasembling the rig completely, then trying to demonstrate it to the owner of a bike shop, I could not get an AT to generate an OK at the console.

Since the modem, unlike external dial-up modems, has no "MR,TR" lights, I could not tell whether it was a setting in the modem that was blocking it (such as ATE0 to turn echo off), or a bad port on my laptop, or an exhausted battery on the modem, or what. So the demonstration failed.

It wasn't until I got to the office where the other Ricochet was and frustratedly tried it on another computer, that I then swapped the 9 Pin cable on the portable Ricochet with the one attached to my host machine, that they both worked right again.

Which is evidence of an uncertain, 8 pin, RJ45 connector. Sure isn't because of worn out cables. I have only had the modems for two days! The frustration comes from the fact that the ONLY way you know that the cable is OK is by getting data back from the modem when a computer is attached. The modem itself doesn't say anything except, by light "I am charging," "I am on," "I am on and I can't sense a mate," "I am on and **can** sense a mate," "I am running out of battery," or "I just lost my connection."

DOCUMENTATION: I am still not competely satisfied with the amount and depth of documentation provided by Metricom to its buyers. Besides giving us the usual "end sheet" of technical specs that is customary today, there could be a little more helpful 'What to expect' when these novel modems operate and do their

different thing. And something about antennas would be a great help to those who buy them for use outside the MCDN area. And wanna bet there are plenty of "undocumented" features in the ROMS? Just my hunch.

SECURITY: The one warning I have gotten from people who know I am using a wireless modem is that they think it is clear-text interceptable, thus not secure for such things as logon passwords through the Internet. I wonder. The manuals say nothing.

But I **know** this is "spread spectrum" radio, which punches its data in a random fashion through any bands of 26mhz of bandwidth (928-902). That's a lot. And the Defense Department developed the technology precisely so it would be hard to intercept. And the FBI and other agencies are awfully nervous about people using the technology - presumably it is hard to intercept by them too. Finally, Metricom did not put in (or say they did) data encryption, which they could have - radio modem to modem. And they have a large commercial network up.

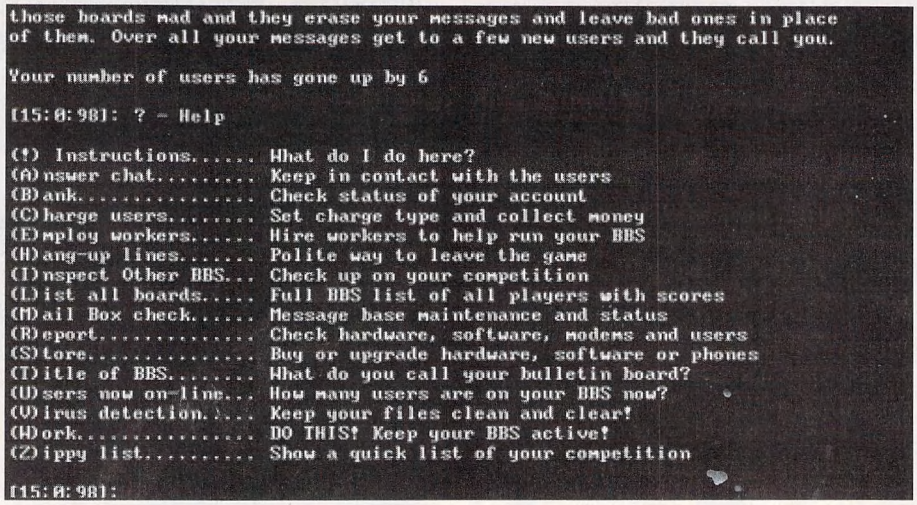
So I am not sure this is a real issue. For spread spectrum is not your historical radio technology. But this should be debated online. For it's another potential clipper chip issue, par excellence.

I like the modems. They fill a real need. To this point I am just a happy customer who shelled out $1,000 for two little black boxes. But if they work for us in our rural third world, school, small organization, customer world, who knows...?

VIRTUAL BBS REALITY? PRETTY CLOSE

by Alan D. Bryant

It's rare that an online game for BBSs garners much attention. Over the years, only the ubiquitous Trade Wars has attracted the type of attention normally reserved for more mainline fare, like BBS software itself. But lately, there's been a great deal of hullabaloo generated over an interesting online game called VSysop, the virtual sysop simulation game.



VSysop, Casey Sprangel's addictive online game

VSysop is the creation of Casey Sprangel, a long-time sysop formerly of Tulsa, Oklahoma and lately a technical support representative for eSoft, makers of TBBS. Sprangel spent over four years developing VSysop, and it's no wonder the results have been so well received.

Basically, VSysop lets BBS users simulate the BBS experience. The real drudgery of the day to day work, like actually reading and typing in replies to messages, has been omitted (though you still read messages and choose the basic tone for a reply that the simulation will provide). What's left is the real meat and potatoes of BBS sysoping, along with an incredible amount of raw fun. Sprangel hasn't removed the challenges of the sysop experience. But then no accurate simulation would render BBS sysoping as constant, unrestrained joy, either.

When players first enter the game, they start with the simplest of DOS-based BBSs, running on an old XT-class computer with a single 2,400 baud line. The object is to grow one's user base over time by keeping those users happy, and to upgrade your BBS with faster modems, more lines, better hardware, more disk space, and so forth. Getting there is the challenge; the game is replete with everything from computer virus strikes to hardware failures to trouble with the telephone company.

One of the most enticing aspects of VSysop is that the game grows with the player. As time goes on, more and more features in the game are revealed. And as the player's BBS grows within the simulation, there are greater rewards — and pitfalls. Sprangel says the game is designed to keep players coming back for more over a period of months, or even years. For BBS sysops who run VSysop on their systems, this presumably translates to better income from their system. And for the users who participate in the simulation, it gives them an entertainment vehicle with real lasting power. Empirical evidence would suggest that Sprangel has fulfilled that promise, as sysops who have bought the game sing its praises.

Sprangel also admits to the existence of several hidden features for the adventurous to seek out on their own. Coupled with activities like hanging out with a hacker, visting the local computer discount warehouse, placing ads for your system in magazines and newspapers, and joining mail networks, the simulation has a tendency to be rather absorbing. Competition with other players in the game (see who can get the biggest BBS first) keeps things interesting.

One of the most frustrating aspects to the game is that it moves in nearly real-time. During a game play session, things can move quickly depending on what things you do and how often you do them. But other events, like the installation of new telephone lines, won't happen in a single day. For example, the earliest you'll see the phone company move is overnight, and sometimes they won't move that quickly. It can be somewhat exasperating when you attract new users to your simulated BBS only to find they're leaving your board for greener pastures due to your busy signals, and there's nothing you can

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do about it until tomorrow. While frustrating and finding me in want of cheat codes, this sort of thing is what keeps players glued to the game.

VSysop has undergone a major revision, with Sprangel adding dozens of new features to the game based on the volumes of feedback he's received since the product's initial release. VSysop Version 2.0 will be available soon, along with a change in distributor arrangements; VSysop 2.0 will be available from Zone One and Bryant Software, both TBBS/TDBS add-on software developers and resellers. The game's price has gone up; new purchases are **$129.95**, while upgrades from the previous version are **$50.00**.

VSysop Version 2.0 by Casey Sprangel / iFX Group. Zone One, 8424A Santa Monica Blvd., #200, West Hollywood, CA, 90069, **(213) 653-6450** Voice. Bryant Software, P. O. Box 102216, Denver, CO, 80250, **(303) 733-3116** Voice, **(303) 777-2876** Fax, **(303) 733-0773 BBS**.

Sarah McLachlan Arista recording artist

FURTHER EVIDENCE BBSs ARE MAINSTREAMING - RECORD PRODUCER GOES ONLINE

by Alan D. Bryant

It's pretty remarkable where you see BBS numbers these days. Singer/songwriter Sarah McLachlan's most recent Arista release, "Fumbling Towards Ecstacy," has been getting a great deal of airplay on college and alternative rock stations. Her unusual vocal styling and hypnotic tunes are great, but I was fairly distracted by a footnote on the back of the CD jewel box from the company who manages and produces McLachlan, Nettwerk Management — right there in the small print is Nettwerk's BBS number.

A quick call to **(604) 731-7007** revealed a beautifully prepared TBBS system. It's evident that a great deal of effort has been put forth to create the system, something not often seen in the realm of corporate BBSs.

The BBS is well-stocked with a number of features geared toward Nettwerk's artists. Nettwerk, who is celebrating its 10th anniversary, handles groups such as Single Gun Theory, Ginger, P.O.W.E.R. and Brainbox, as well as McLachlan, representing a rather wide variety of musical styles and tastes.

Nettwerk's BBS file areas contain a virtual cornucopia of artist-related materials. In addition to newsletters and discographies, you can download GIF pictures of the artists Nettwerk represents, as well as snaps of the cover art from those artist's albums. There's also a large section of sound bites from artist's recordings. The bites, stored as WAV files in 8-bit stereo, were sampled at 44 kHz from original DAT tapes. Since they're 8-bit, they are not quite CD quality — but the resulting files had to be small enough so they could be downloaded in less than the average lifetime. (I was rather left wanting 28.8 kbps modem support on the BBS after the experience.)

Using Jack Rickard's PIMP e-mail option, Nettwerk lets you grab files from the BBS through an ftpmail server as an alternative to downloading. You can get additional information on their Internet accessibility by sending e-mail to:
info@nettwerk.wimsey.com

The BBS also features an online shopping facility, where you can order any of dozens of products direct from Nettwerk. Items include CDs and cassettes, t-shirts, books, posters and several other goodies. Have your credit card ready.

In addition to their BBS, Nettwerk also maintains a terrific collection of html pages on a web server provided by their Internet service provider. To access Nettwerk's home page, use the URL:

http://www.wimsey.com/nettwerk/

On the server, you'll find artist information, pictures, sound bites — even video clips.

Nettwork Records and Management, **(604) 654-2929** Voice, **(604) 654-1993** Fax, **(604) 731-7007** BBS. E-mail: **info@nettwerk.wimsey.com.** ◆

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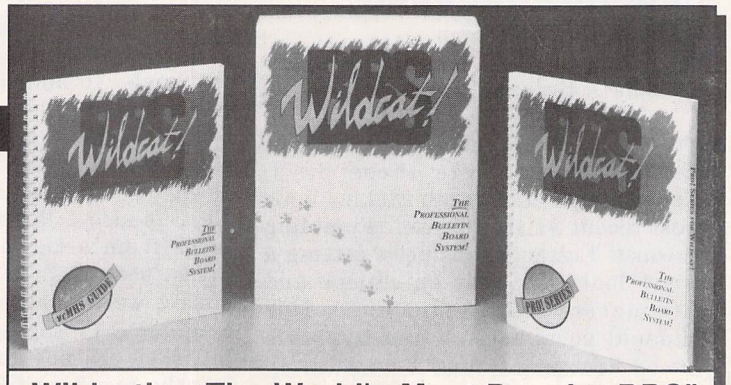

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GADGETS & GIZMOLOGY

by Gary W. Funk
Gizmologist

PACIFIC CREST CARD GRABBER

After attending a rather small trade show in Dallas last month I got home and noticed a pile of almost 70 business cards from vendors I met at the show. These combined with over 200 received at ONE BBSCON in Atlanta, left me with a sizable stack of lose leaf, unorganized information - much of it I may someday want.

Now there are several stacks of business cards sitting on my desk. The obvious problem with business cards is organization. You can never find the one you want when you need it, and even if you do remember the name of the person you want, you have to look through those stacks and it is always the last card you look at. Business cards are a great way to keep track of people and companies, but how do you keep track of them.

The solution came in a small piece of hardware, called the CardGrabber. The CardGrabber optical scanner and database software offer a simple way to manage those stacks of business cards by placing them in an address book database. It is a small unit that plugs directly into your computer's parallel port and is powered by a small AC adapter.

Installation and setup is very easy. Simply attach the unit to your computer's parallel port, plug in the AC adapter, start Windows, and run SETUP from the disks supplied. After the information is copied from the three disks, the program starts and you can now scan your first card.

The CardGrabber software will scan the card, give you a graphic image of the card, and place the information on the card in the appropriate fields of the database, giving the user a chance to correct or add any data. While it does read some cards perfectly, about 70% of the cards I ran through it did require some minor editing of the fields, only about 10% required major editing. Then there are some graphic cards it will not read at all, such as those with multi-color bands or grey scale bands, but you can still place the information in the database, you just won't get a usable graphic image.

The information in the database can be searched by First name, Last Name, and Company. Multiple cards may be displayed - four, six, or sixteen at a time on the screen. Cards may be viewed by catagory or filter, and there is a screen that will display a complete directory of name and company. Importing and exporting from dBASE, Access, ASCII text, and others is handled through ODBC

CardGrabber may become a collectible

(Microsoft Open Database Connectivity). There are also several print options available.

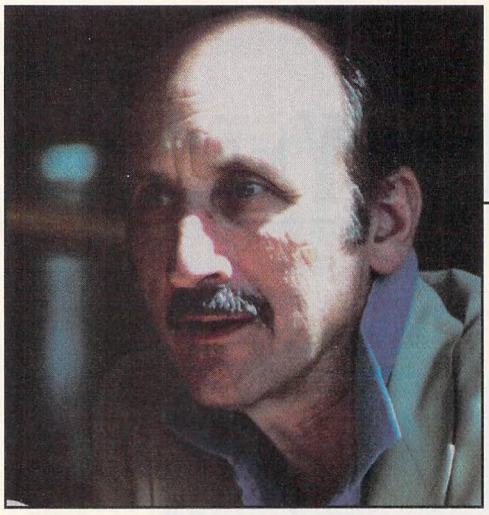
While this is generally a single user product, you can buy a five user license which permits you to place the software on five computers. However, you still need to share the scanner. This is not too bad as it simply plugs into the parallel port when you need touse it.

In an office environment, it would be nice to have the scanner on one machine where a data entry person could input any business card, and all other machines have access to that database. This is not the case with the current software. Each user must have a separate database and that database cannot be shared.

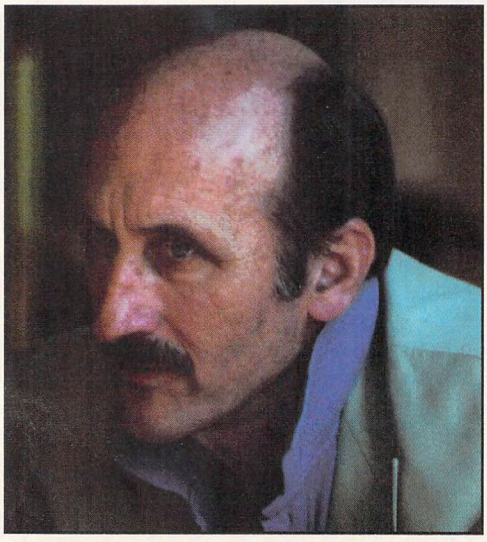
There also seems to be a problem with the phone dialer. Repeated attempts to get the software to dial a Hayes Optima 288 failed, and even resulted in a total lockup of the computer requiring the reset button be pushed.

At a suggested retail price of $239.99 for the CardGrabber and single user software, and $499.99 for the CardGrabber and five single user software, this is a very nice peice of hardware to have. It's available at CompUSA and other major computer centers.

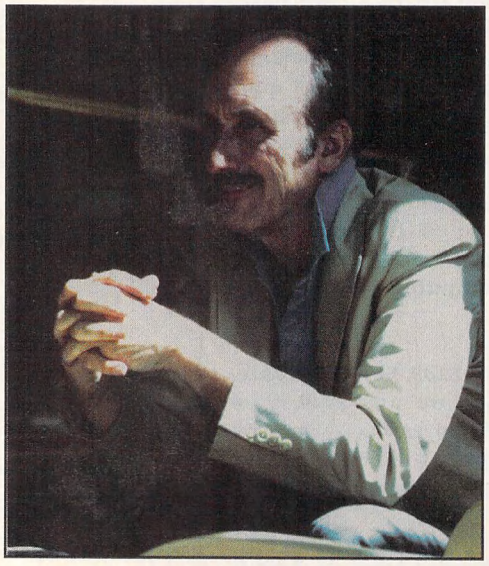
The device may become a collectible as Pacific Crest closed its doors October 10 and is now looking to find a buyer for the product. Hence, technical support or further enhancements will not likely occur. ◆



"It's sad commentary-the truth is there is enough food on the planet to feed everybody, and the fact is we don't seem to have the mind or the commitment to deliver it."



"I think the trekies were right all along."



"I always do an analogy between people who bought a car and when they get a flat tire they call triple A, that's Macs, those are Mac people."

INNERVIEW with Brian Gallagher

STOOKEY - A LITTLE PIECE OF HISTORY

He sang with Dr. Martin Luther King Jr. at the Washington monument during the march on Washington in 1963 and has toured with many of music's legends including Dave Brubeck, (a gracious grand man he assures), and the Brubeck quartet during the '60s; he calls Bob Dylan Bobby, will be recording yet another album this month titled "Life Journeys" with more big names in the musical recording industry than there is room to print here, and was jamming with Richie Furay of Buffalo Springfield and Poco fame the night before this interview. His name is Noel Stookey, folk singer, song writer, guitarist and sysop of the 14 line Celebration Station BBS, **(207)667-0800** of Ellsworth Maine. Sound familiar? Probably not, but perhaps you'd know him better by his stage name - Paul, from Peter, Paul and Mary.

Still performing 50 shows a year with the same trio that brought us "If I Had a Hammer," "The Wedding Song," "Leaving on a Jet Plane," "Lemon Tree," and "Puff the Magic Dragon" to name a few, Stookey - on the road about 100 days out of the year, is *really* a sysop. Everywhere he goes he keeps a 100 Mhz laptop in tow, and he uses it everyday - so much so that the 14.4kbps internal modem on his machine had logged on for the last time when he stopped in Denver this summer, and it is not uncommon for him to log out of a chat session because the sound check is starting for the night's performance.

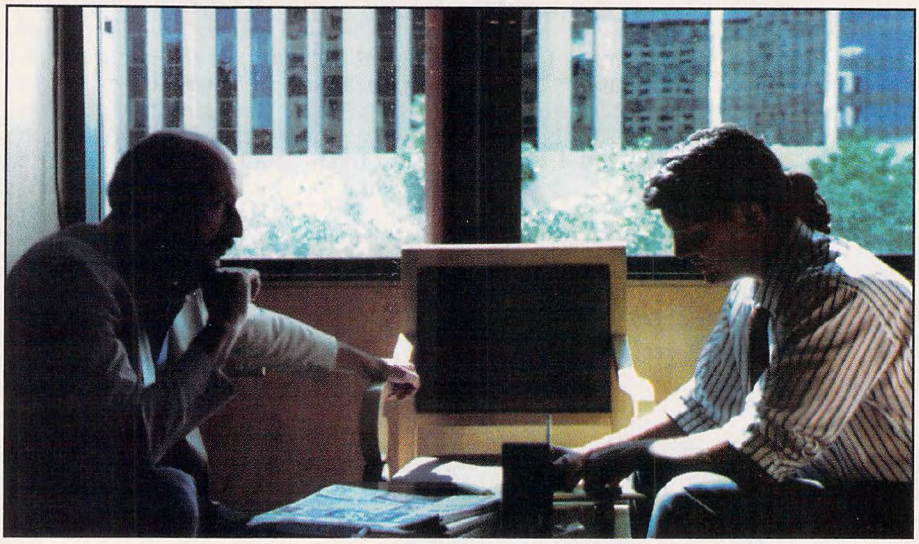
Logging on everyday he takes the role of the proverbial good shepherd, checking his messages, answering mail, making sure that everyone on the system is getting the attention they deserve, regardless of where he may be. When on the road the time he spends online is inversely proportional to long distance charges, but when he is at home it has been more than once the log-off screen has popped up with "You have been online 360 minutes." No one can say he doesn't take his sysoping or BBSing seriously.

An avid reader of BYTE magazine, Stookey read an article about Alan Howell, author of UBBS, one of the first BBSs, in the mid 1980s. Soon after, he set up his own system running UBBS on an Epson QX10 CPM, later he switched to PC-BBS on an Amiga, and then , in 1989, to Galacticomm and PCs. He chose the Major for one reason and one reason only...chat.

Stookey by definition, is a chat buff. "When you live in a rural community with neighbors 60 to 80 miles apart from each other you never get to see each other except when you are on the board," he said. A self-described "facilitator" when it comes to pushing people to go into a Flash Chat session - a program written by Galacticomm's founder Tim Stryker which has ten chat strings horizontally flowing across the screen in ticker-tape fashion. Keeping up with Flash Chat conversations is an entertainment he finds challenging and exciting, comparing it to a jet pilot's tracking all of the dials and indicators before them in a cockpit. "I've got to tell you it's a real buzz," he said, "you don't think your mind is capable of handling that (all ten chat streams) but it really is." A noted shortcoming of the program however, is its lack of cross-platform support, (i.e. Macintosh). With the new lines that Stookey recently added to his system he finds it a source of continuing frustration that he isn't able to Flash Chat with all of the new Mac users logging on.

The driving force behind Stookey's board is the pursuit of a sense of community, of family, in the tumultuous and often stark ASCII world of computer bulletin boards. With the advent of multi-line systems, and the proliferation of cyberspace by pirate and pornographic boards, Stookey designed his board to be an electronic haven for cyber travelers who don't wish to participate in that realm. As to the growing cybersmut industry, he doesn't see regulation as the answer - "I'm a firm believer that most any kind of discipline really is going to come from (the kids) themselves with the guidance and support of their families." Steering kids away from these and similar systems is a part of what his BBS is all about, but he doesn't intend to do it by preaching about the evils of other systems, he wants to do it by simply being better and having more to offer.

To achieve this end, Stookey has a plan that revolves around a new multi-faceted graphical interface. "First of all it's got to have color," he said emphatically. "It's got to be bright, it's got to be interesting, it's got to move, and it's got to be owned by the participants themselves - they have to feel like they're developing it." In choosing a theme for this visionary interface, Stookey picked space because he views it, and the possibilities within it, in very high regard. When Congress talks of cuts in NASA's budget and of scuttling the space program he said, "I really think it's a mistake - I think the Trekies were right all along." He believes if the money currently spent on defense industries were redirected to space research, it could well provide a panacea of solutions for the global economy and draw the citizens of the world together to focus on a common goal.



Noel Stookey and Brian Gallagher at the Westin in Denver, Colorado

Given his propensity for gab and a curiosity and belief in pursuit of the stars, (not in Hollywood but up in the sky), it is not surprising this innovative sysop has come up with a new twist for BBSers, particularly those who are addicted to online chat. When the GUI (Celecomm) is complete, the first thing new users will see when they connect to the system is a starfield rushing by as their ship is caught in a tractor beam and pulled slowly into the main station. By using the control key in conjunction with the cursor arrows, users will be able to adjust the view from port, aft and starboard "cameras" of the vessel. When the ship completes docking the

PROFILE

Born and raised in Dorsey, Maryland, Stookey moved to Michigan when he was eleven, where he attended high school and Michigan State University. In 1959, he moved to New York to pursue an interest in photography and went to work for a photographic chemical company. Shortly after arriving in the Big Apple, Stookey found Greenwich Village to be a favorite hangout. He described the village like a big university, with every coffee house a classroom, and the regulars their student body. Initially, he found playing chess with the other regulars to be the entertainment of the evening, then as chess tables gave way to stages he just went with the flow.

"One day (I) went to the table that I usually sat at and the table was gone and they were building a stage and then I remembered I had done some rhythm and blues and stuff in high school and some in college and I started going to the coffee house more and not showing up to work in the morning," he said laughing. "It was all downhill the rest of the way uphill, (or) it was all uphill the rest of the way downhill - I can't remember."

At the time, it was common for performers to do their set, or sets, at one club and then go to another club and watch other acts. Stookey met up with Mary Travers on this circuit and the two conspired on several songs, but the group would never have gotten together were it not for Peter Yarrow's wandering eye in a guitar shop. Seeing Mary's picture on a bulletin board in the store, Yarrow asked his agent if he knew anything about her - indeed he did. His agent's reply, according to Stookey, "That's Mary Travers, she's got a great voice if she'll work." That held a double meaning for the talented Travers, it meant not only would she consider working together, but also if she would discipline herself to work.

Through this chance encounter, Mary and Peter were introduced and it was agent Albert Grossman's idea to form a trio. Since Mary had worked with Stookey in the past she suggested him as the third member. When Grossman first approached Stookey with the idea of being in a trio, he initially hesitated - at the time he was a working a menagerie of jobs as a masters of ceremony, comic, and singer in the local scene and doing the same thing in Boston's Club 47 on his days off, which incidentally was the same place where Joan Bayez was working at the time. What convinced Stookey to give the trio a shot was the unbridled spirit and clear, strong voice of Mary.

Formed in 1960, Peter, Paul and Mary produced their first record in 1961 and rocketed to instant fame upon its release. Stookey attributes a portion of their success to the times, "The music at the time," he said, "was rock'n'roll three chord progression boy/girl relationships. And then folk music came along. We'll give you a love song but it will be a little bit different like 'Don't Think Twice,' but then we'll also talk about the end of the world; we'll talk about intolerance; Central America, we can talk about anything. And even though folk music came and went in terms of its fashionability, none-the-less, its major impact was not style, its major impact was content."

In over three decades of performing, they produced a number of top 10 songs, with "Leaving on a Jet Plane" the only song to make it to number one. One of their top 10 hits "The Wedding Song," is a piece Peter asked Stookey to write for his wedding. After pondering the situation Stookey decided that he wasn't really qualified to write a song about marriage so he turned to the one entity he felt was qualified - God. After praying for divine assistance, the song came to him one morning, he said. And as Stookey won't really take credit for the song - he set up a trust fund to distribute the proceeds from its sale to charity - over $1 million.

first place users will go is to a general chat room, (imagine), where they are encouraged to either join in the fray or just stop by for quick salutations before continuing on to other areas of the system or, if they are lucky, into the chat room of another user; and this is where the real fun begins.

Oregon Programmer, Harold Miller

Under Stookey's direction and vision, Oregon programmer Harold Miller, "Peabody" on the BBS, is making it so travelers on CeleStat will have their own custom "droids" which they construct and color themselves and will represent them while online. Similarly, users will have their own chat rooms which they will be able to decorate themselves, right down to pictures on the wall, furniture and background music. The whole idea, Stookey said, is to make the board feel as close to home, or what a user would like to think of as home, as possible.

While traveling around in their spaceship or chatting in a private room the system is slated to keep users "in-touch" with the main space station through a single-line communicator giving them the ability to track the status of downloading files, their e- mail and other BBS functions. There will also be an alternate universe available, full of planets for users to build upon, colonize, what-have-you, a sort of multi-user SIM CITY done on a planetary scale . How to get to this vast and unexplored universe when it is completed Stookey isn't telling, that's for those who dare to go where no man, (or woman) has gone before.

Miller first decided to help with the project when he saw a message from Stookey while on CeleStat concerning his idea for the new interface on New Year's Eve 1989. Shortly afterwards Miller was busy working on the interface in his spare time, work that he found to be slow and time consuming, often taking one step back for every two forward - but well worth it. The reason for the delay in getting a working prototype, Miller said, is the technologies keep changing so fast that it is hard to keep up. After changing the programming language from Borland's Turbo Pascal to C++, all the work done up to then had to be entirely rewritten. At this time the framework from which to hang things on is fairly well in place, but the finishing touches are innumerable. Another obstacle facing Miller is that while there are a lot of good tools and source code for C++, he said, most of them are expensive and tied to a specific compiler and version. For this reason, there is a possibility of re-writing the interface yet again, this time as a Windows application.

Still another factor entering into Celecomm's yo-yo-ing existence is a proud and imaginative sysop who is always thinking of new additions and add-ons that will make the interface better still. In fact, when choosing a screen to send for this article, Miller, his wife, and Stookey all came up with last minute improvements just to make it that much better and worked diligently on them right up to the edge of deadline. With the complexity of the interface and its multifaceted design, it is anyone's guess as to how long it will be before any usable version exists, unless that is, Miller and this philanthropic sysop get a little help from an online community widely known for its benevolence. Therefore, any PC artists, astronomers, or programmers wishing to lend a hand to Miller, Stookey and the Celebration Station - help is wanted and welcome.

For those who can't wait for the GUI to be completed there is still plenty to do on this BBS. Like many systems, files are a favorite and there are two free file areas with communication programs, utilities, descriptions about the system and even a Peter, Paul and Mary concert schedule. There is also good number of MS DOS, Windows, Macintosh and Amiga files. In addition the board has 33 .gif images of select artists doing what they do best, including BB King, Paula Abdul, Robert Plant and of course Peter, Paul and Mary.

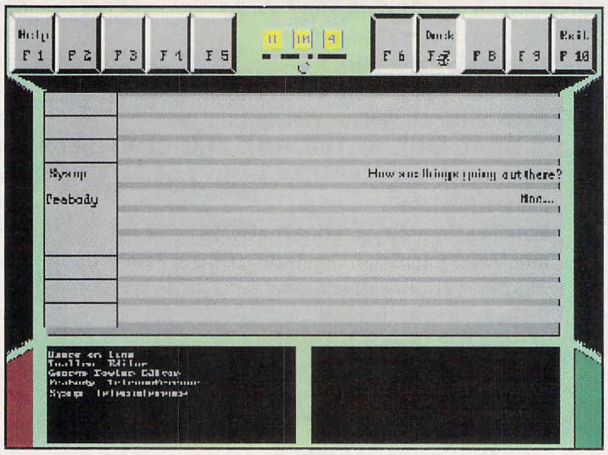
The board has 15 forums on a variety of subjects, of the more popular ones I looked at, reading the messages in "Chapel" was an extremely moving experience as callers looked for and found comfort and solace when dealing with the loss of a loved one to cancer. It is a non-denominational area that packs the emotional wallop of the Lord's army and then some. In the FOLK forum, one

The legacy of Peter, Paul and Mary materialized from the varying musical backgrounds each brought to the group - Mary's in traditional folk and blues, Peter's in classical and folk, and Stookey's in jazz and classical, and their unique approach to harmonies. The group doesn't sing standard or parallel harmonies like Crosby, Stills and Nash; they utilize a staggering of harmonies - doing obligato, and staggered answers instead. Stookey's all-time favorite harmony is that of Stu Ball, a song about a horse with a harmony line that jounces up and down to project the feeling of a horse, rather than mirroring the lead on a different note as is usually done. Another difference between their harmonies and "typical" harmonies is the way in which they are sung. For Peter, Paul and Mary, harmonies were always sung "...with the same fervor that the lead was singing," Stookey said, "because our melody was just as important and it worked, and it still does."

It is this fervor, this passion, that Stookey and the group portray so well that has made Peter, Paul and Mary a household name all across America and much of the world. Many, perhaps all, musicians at one time or another forget the words to songs they are singing - even if they wrote the song, but few take the faux pas as seriously as Stookey. "I get mad at myself for doing it (forgetting words)," he said. "It's not senility, it's loss of focus. And loss of focus in my mind is a loss of passion and that's a no- no on stage. I think there's a level of performance that you aspire to...where the passion of the moment makes you an instrument of the song's intent.

"I could tell you that singing with Dr. Martin Luther King was a great moment, but it's a historically viewed moment. You know the passion - the height of commitment, when you sang 'If I had a Hammer,' when you're talking about justice and equality for 100,000 (sic) (300,000) people at the Washington Monument." Noel Stookey, musician and philanthropist - extraordinaire.

[Photographs by Charles J. Moore, who also provided musical input for this interview.]



Alpha test Celecomm in "Hyperchat"

of two, the talk seemed largely centered around a recent performance by Bob Dylan. Other than a warning not to see Dylan live, (there was a posting that his new album is considerably better than the particular live performance that elicited so many caustic remarks), there were a number of other messages on the lighter side, one in reply to "If I hook onto the Internet, will I still have a life?" had this to say: "Yes. You'll have a fine, rewarding life hitchhiking along the information highway. You'll be a 21st century version of Woody in a boxcar. What you won't have, is a bank account, any LIVE friends, and your romantic encounters will be limited to e-mail."

The folkNet forum, **alt.rec.music.folk**, is full of information much of it concerning opinions on recent CDs or tours, the listing of acts some college campuses would be hosting, and even a posting from someone wondering just what a tenor guitar and a tenor ukelele are tuned to. Looking for a really good instrumental bluegrass recording? "Keep on the Sunnyside" by Randy Scruggs with Earl Scruggs and Doc Watson comes highly recommended.

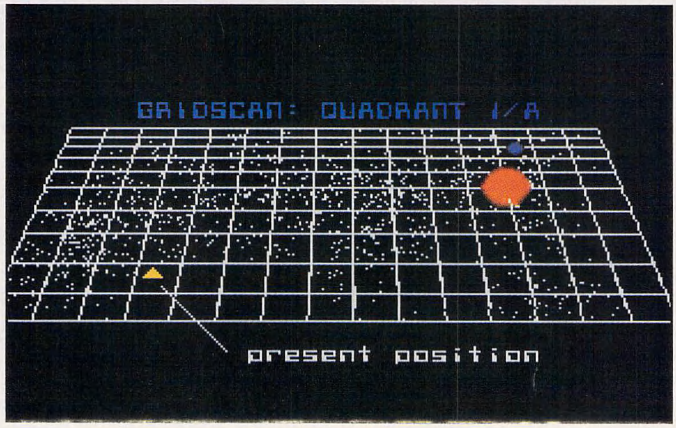
Peter, Paul and Mary in Concert

The HERE&NOW forum - also very popular contains a number of messages on a wide variety of topics including Haiti and some talk about SoftTerm, (a windows shareware program that includes TCP/IP, SLIP kernel, ansi and rip graphics as well as other terminal emulations), and a most intriguing news update titled Edupage. Culled from various sources including the Wall Street Journal, New York Times, BNA Daily Report for Executives and the Chronicle of Higher Education, the well organized newsletter is compiled by a consortium of "leading colleges and universities seeking to transform education through the use of information technology." Recent headlines include: Pushing Fiber To The Limit, Sony Offers Magic Link, Naming Names On The Net, Prodigy To Provide Internet Service and The Real Future Of Virtual Reality among many others. For more information about Edupage e-mail **info@educom.edu**.

A free forum for the local school and library system assists teachers in exchanging information about varying educational endeavors and the latest best books and programs available. And three local newspapers take advantage of CeleStat, with their reporters uploading stories to the system and editors downloading them.

The system itself is set up on a 486/66 with a GTEK local bus card connected to a Digiboard. There are also two internal modems and a CD ROM. Subscriptions are 50 cents per hour with a $5 minimum purchase. All proceeds from subscriptions go to Celebration Shop in Bedford, Texas - a nonprofit corporation devoted to the musical encouragement and support of children dealing with severe, chronic and life-threatening illness-es. For more information about the organization contact Celebration Shop, Inc., P.O.Box 355, Bedford, Texas 76095; **(817)268-0020**.

Besides being a chat master, philanthropist and visionary sysop, Stookey will take a whack at programming too. "In my naivete, I'm a pretty bold programmer," he said. "That is to say I don't know diddly, but I'll take a hex at it and open up any executable - I don't care." One program he took a "hex" at is the Internet executables because there wasn't enough room for the addresses, (26 characters). Those using QWK mail packages noticed that their addresses frequently got truncated; by shortening the word "internet" to "in" he was able to pick up an additional eight characters. Not bad for not knowing "diddly."



Traveling to the Celebration Station

Stookey has been married to wife Betty for 31 years and has three daughters who are all, much to his dismay, Macintosh users. Not that Macs are bad machines he says, it's just that they are not PCs. "I always do an analogy between people who bought a car and when they get a flat tire they call Triple A, that's Macs, those are Mac people," he says purely in the interest of joviality.

For those who are interested in chatting with a legend, helping out with the construction of the bulletin board of tomorrow, or would just like to speak with someone who is every bit as genuine, good-natured and warm as the songs he sings - call the Celebration Station and find the sysop - he's one in a million.

The Celebration Station, attn: Noel Stookey, #3 Neworld Square, Blue Hill Falls, ME 04615; **(207)667-0800** BBS. ◆

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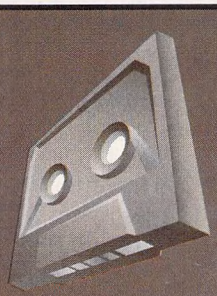

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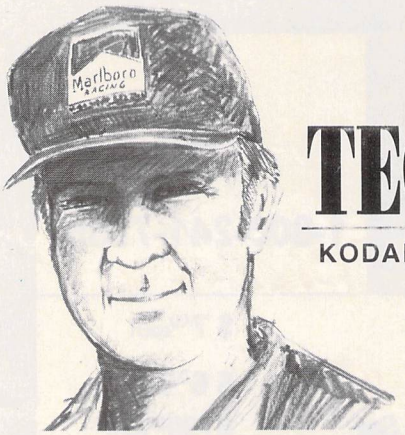


TECHNOLOGY FRONT

KODAK'S NEW DIGITAL CAMERA OFFERS HOST OF IMPROVED FEATURES

Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: 72777,2677, MCI Mail: 321-4127, INTERNET: jim.thompson@wnsnews.com

Kodak was among the first to see the digital handwriting on the wall of the photographic world. Their first major foray into this world resulted in the DC3 which was followed by the highly acclaimed DCS 200 digital camera. Kodak has expanded on the technology developed with their original digital cameras to produce the DCS 420 professional digital camera which sports a host of new features.

"The new camera is a vast improvement over the original, DCS 200," says Ron Hussey who takes all the racing photos used on our BBS, Marlboro Racing News.

Ron has been a professional photojournalist specializing in motorsports for some 20 years and is also one of the first people in this or any other country to use the Kodak digital camera (first the DCS 200 and now the DCS 420) on a production basis in a deadline environment. These factors make him one of the few experts on digital photography and in the field-use of the Kodak camera.

In his opinion, "The digital camera has made it possible for the first time to capture and transmit photographs from the site of a race or other sporting event in time to meet the deadlines of the major newspapers. In the past, we often missed deadlines because it was not possible to develop the film, print the photos and transmit them in time. In most all cases, we can beat any kind of film process, and this includes those agencies who are scanning the negatives, by a good half hour with the digital camera."

HIGHER QUALITY AND BETTER COLOR

Primary among the enhancements in the newest version of the camera is a higher quality imaging system. The DCS 420 has a total resolution of 1.5 million pixels and 12 bits per RGB color for 36-bit color ability.

This represents a noticeable improvement over the 10-bit color of the older DCS 200. The CCD-imaging array in the newer camera is also more evenly balanced than in the past resulting in a better rendering of the reds and greens.

Images from the DCS 200 often display small greenish/blue specks. Also, the colors were often not quite true. This was especially evident in the reds.

The DCS 420 corrects most of these problems. The colors are more balanced and, for the most part, accurately rendered. It also appears that the color saturation is better with the newer camera.

NIKON N90 CAMERA

The DCS 420 uses the Nikon N90 camera body attached to the Kodak imaging array and camera back which contains the storage device. The DCS 200 is built around the Nikon 8008.

The N90 was first introduced in 1992 and has quickly become a favorite among professional photographers. The N90 accepts all F-mount Nikon lenses and has a top shutter speed of 1/8000th of a second. The excellent optics in the Nikon lenses add significantly to the overall quality of the final images.

The built-in meter, which is among the most advanced available, provides metering via an eight-segment matrix. It is 74 percent center-weighted and has one percent spot metering. The LCD display provides lots of useful information such as f-stop, shutter speed, exposure mode, ISO and the metering pattern. All-in-all the N90 offers an excellent photographic base for the digital system.

"The camera itself feels very much like a Nikon F3 in terms of weight. It is also lighter and easier to handle than the older model," says Hussey. The one thing he would change is the "type of grip" used on the camera. Ron notes that, especially in crowded or cramped locations, the camera is somewhat difficult to handle. He would like to add some custom grips to the camera body.

The actual dimensions of the camera are: Width=6.7-inches, Depth=4.5-inches, Height =8.2-inches. The actual weight is: 3.75 pounds (1.70-kg). The camera supports ISO settings of 100 to 400. These settings can be changed for each exposure.

Because of the way the CCD is integrated with the camera, the focal length of any attached lens is magnified by a factor of 2.5. For sports photography where a long lens is normally needed, this means a smaller and lighter lens can be used. There are disadvantages, however, when shooting in close quarters or where a wide-angel or panorama shot is needed. Under this equation, a 28-mm lens, which is normally considered as a good wide-angle, yields the same results as a 70-mm lens.

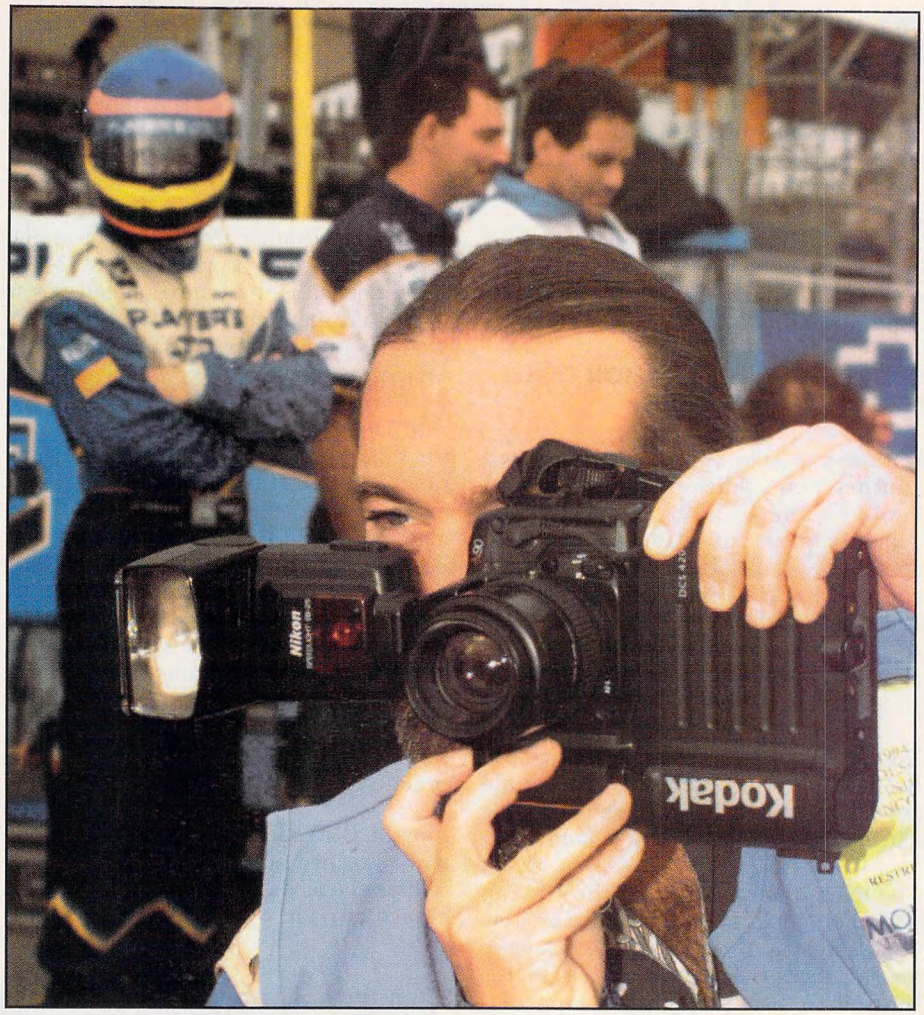
MULTIPLE IMAGE CAPABILITY

The DCS 420 can capture several images in succession. With the older camera, there was a delay of between three and five seconds while an image was written to disk before the next picture could be taken. This was a severe drawback for action photography such as when covering a sporting event.

Those using the older camera simply had to accept the fact that we would likely miss some critical shots while waiting for an image to be stored. Everyone worked around this flaw, and hoped that nothing important happened while the image was being written to disk, but they were not always happy.

With the new digital camera you can fire off a burst of five images in succession in 2.5 seconds without the slightest pause. This is accomplished by additional memory which allows for the images to be temporarily stored before being written to disk.

"The ability to capture multiple images is the single biggest improvement over the older camera. In an ideal world, I would like to see them add more RAM so I could take even more shots in a burst. But with the new camera, I definitely have a lot more confidence in being able to capture the critical moments of an auto race or other breaking news or sports event," notes Ron.



Photojournalist Ron Hussey using the Kodak DCS 420

REMOVABLE STORAGE AND AUDIO

The storage itself has been made much more convenient thanks to the use of removable PCMCIA cards. The older camera could store only 50 images on the internal fixed disk. The 420 can store up to 62 images on a single 105-MB PCMCIA hard drive. The disks can also be read directly from PCMCIA drives. This means the drives can be removed and plugged directly into a PC and read while the camera continues to capture images in the field.

While still on the camera, the actual photos occupy 1.5-MB of space. When transferred to the computer, the files expand to approximately 4.4-MB in size. "In their raw form, the digital images are not as good, quality-wise, as what you would normally get from a silver-halide (conventional film) product, but after it is screened for 135 or 185 lines for printing in a newspaper, it really doesn't make much difference," says Ron. "The images look as good, and in some cases, better than what you might expect from normal prints," he adds.

For high gloss magazines the images reproduce nicely providing you keep the final size to about half a page or smaller — any larger and the image begins to break up. One way around this is to run the photo in black-and-white. The electronic images look great in black-and-white even blown up to full page in a standard size high gloss publication.

Photos are transferred to a PC or Macintosh via a SCSI cable. Included with the camera is software that allows for direct import into PhotoShop on the Mac. Kodak also ships, at no charge, software that allows for the import of photos into PhotoStyler and other TWAIN-compliant applications. It takes approximately 35-seconds to import an image from the camera to the computer using Adobe PhotoShop on a Centris 650 allocating 16-megabytes of RAM for the application. Another significant improvement found in the DCS 420 is the addition of a heavy-duty built-in battery which allows for the capture of up to 1,000 images before being recharged. The older camera used rechargeable AA-batteries which were always going out at the most inconvenient time. The battery in the new camera can be fully recharged in about one hour.

One convenient addition is the ability to link audio to an image. A built-in microphone allows you to record "telephone-quality" audio information to accompany an image. Pushing a button on the rear of the camera activates the recording feature. Audio can be added before or after an image is taken. Of course, adding audio also subtracts from the space available for images. One minute of recorded audio occupies approximately 500-KB of disk space.

The DCS 420 comes in three models: DCS 420c (color), DCS 420m (black & white) and the DCS 420R (infrared).

All three models include the camera itself, an AC adapter/charger, Mac and PC cables and driver software and manuals.

The minimum requirements for a Macintosh system are a Mac II or higher, including all Powerbook machines. Minimum configuration includes 8-MB of RAM, 32-bit QuickDraw software and Adobe PhotoShop version 1.0 or higher.

For the PC, minimum requirements include a 386 or better processor, 8-MB of RAM and any TWAIN-compliant application software.

SUPER HIGH RESOLUTION DCS 460 ALSO AVAILABLE

Kodak has also recently announced another new addition to their digital family — the DCS 460. Like the 420, which employs full-frame CCD images measuring 1524x1012 pixels, the 460 sports a CCD imager measuring 3060x2036 pixels. The 460 offers a total resolution of a remarkable 6-million pixels (the 420 has total resolution of 1.5 million pixels).

Like the 420, it captures 12 bits per RGB color (36-bit color), removable storage media, a built in re-chargable battery, and is based on the Nikon N90.

The main difference is that the 460 can deliver a single photo of approximately 18-MB in size. However, there is a price for this exceptional quality. The ISO is limited to 100 and it takes approximatley 12-seconds to write the image to disk before a second photo can be taken. It also requires at least 32-MB of memory in the attached computer to transfer the images. The price is also a shocker at **$27,995**.

This camera was announced just as we were going to press, so I did not have a chance to use it or even to see it in operation.

EASE OF USE

Using the the 420 digital camera is about as easy as professional photography gets. One of the advantages of digital photography over film is that you can adjust each picture individually instead of being locked into the characteristics of a particular film until the roll is exhausted.

Of course, the biggest advantage is the ability to manipulate the images after they have been taken. A program like PhotoShop from Adobe or PhotoStyler from Aldus allows even the novice to create effects and enhancements that could take hours, or even days, to duplicate with conventional film.

I am not saying that the Kodak DCS 420 or any other electronic camera will replace film entirely. There will always be situations where film is the only answer. In most cases this is where an extremely high quality image or a special effect is required, or where the final output will be an extremely large image, like a billboard. Yes, film is not going away soon. It is clear, however, that in situations where speed is an important element of the project, such as news and sports events, electronic cameras will rule.

The DCS 420 from Kodak is not the ultimate solution for digital photography. Kodak still needs to correct the magnification of the focal length of the lens, decrease the weight, and add more RAM so more photos can be taken before they are written to disk. Yet, in the larger scheme of things, these are relatively minor problems. Overall, as a tool for the photojournalist, the camera is a remarkably solid piece of equipment. It is rugged enough to stand up to normal abuse yet light enough to be practical.

For the BBS operator who is looking for a way to provide high quality photos online, the Kodak camera offers the best choice currently available. If you are thinking about offering an online catalogue of products and need to produce original images, this camera may be the best solution, despite its high price tag. ◆

CONTACTS

KODAK PROFESSIONAL DCS 420
Eastman Kodak Company
Rochester, New York 14650
(800) 242-2424, ext. 77
COST: **$10,995** for the DCS 420
COST: **$27,995** for the DCS 460

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PEOPLE ONLINE by Phyllis Phlegar

WHERE IS RICHARD NORRIS WILLIAMS?

The year is 1946. The place, Munich, Germany. Identical twins Hilda and Irene, 18 years old, are walking down the street when they are stopped by an MP in a jeep. If this is starting to sound like a "B" movie, my apologies. It's just that there are a lot of names, places, and dates coming up, and I want to get it all straight in your mind. And my mind too. If some of the details seem unnecessary, hang in there, it will make sense pretty soon.

This MP's name is Richard Norris Williams, Dick to his friends. Dick, 26 years old, notices what pretty women these twins are, and stops to chat. He discovers that the twins speak English rather well, and so they should...they are working for the US Government.

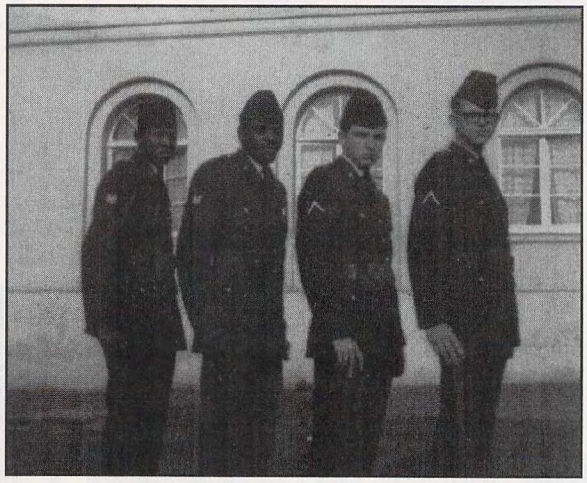
Dick really liked Hilda, and she liked him. I'm guessing here, but I think they fell in love. By March of 1947, Hilda realizes she's pregnant. Dick wants to marry Hilda, and take her back to the United States with him. Hilda's father, Ludwig, says no! Why should he let his 18 year old daughter leave him? In Germany in 1947, a person isn't of age until 21, and what Ludwig said, went. Besides, he didn't want to lose his first grandson, Harry, who was born in November of 1947. Who could blame him? This G.I. gets his young daughter pregnant, and then wants to take her and her baby very far away, and Ludwig didn't know when he'd ever see them again.

Dick wasn't Ludwig's favorite person, and Dick only got to see his little baby son Harry once, when Hilda brought him outside the apartment for Dick to see. Shortly after that, Dick was shipped back to the states, and never saw Hilda or Harry again. It's not like Hilda and Dick's mother didn't try to keep in touch...they corresponded, and Hilda even sent Dick's mother flowers on Mother's day. But when Harry was two years old, and Hilda was 21, she was of age, and married another serviceman. Unfortunately, due to Hilda's shame of having a baby out of wedlock, and her new husband's growing jealousy of the relationship between Hilda and Dick's mother, he put a stop to all correspondence between them when Harry was eight. No one told Harry who his real father was, and Harry didn't know until he was 25. Suffice to say, Harry's relationship with his stepfather was never good, and he was thrilled that the man who he thought was his real father, was no blood relation at all.

I met Harry recently on CompuServe, in the Collectibles forum. Harry's a phonecard collector, and because he's fluent in German, he's been asked to sit in on at least one of the international conferences with German CompuServe members. I don't know if I am easy to talk to, or just nosey, but Harry eventually started talking about himself and his life...from his birth in Munich, his arrival in the United States with his stepfather and mother when he was five, how he learned English by reading comic books and listening to kids in the playground, and how he joined the Army at 17 and went to Vietnam.

Phyllis Phlegar is a graduate of the University of North Carolina at Chapel Hill, and also holds a private pilot's license. She is a freelance announcer and her work can be heard on Business Radio Network, National Public Radio and the Armed Forces Radio Network. Phyllis is currently working on a book to be published by Addison Wesley Publishing Company.

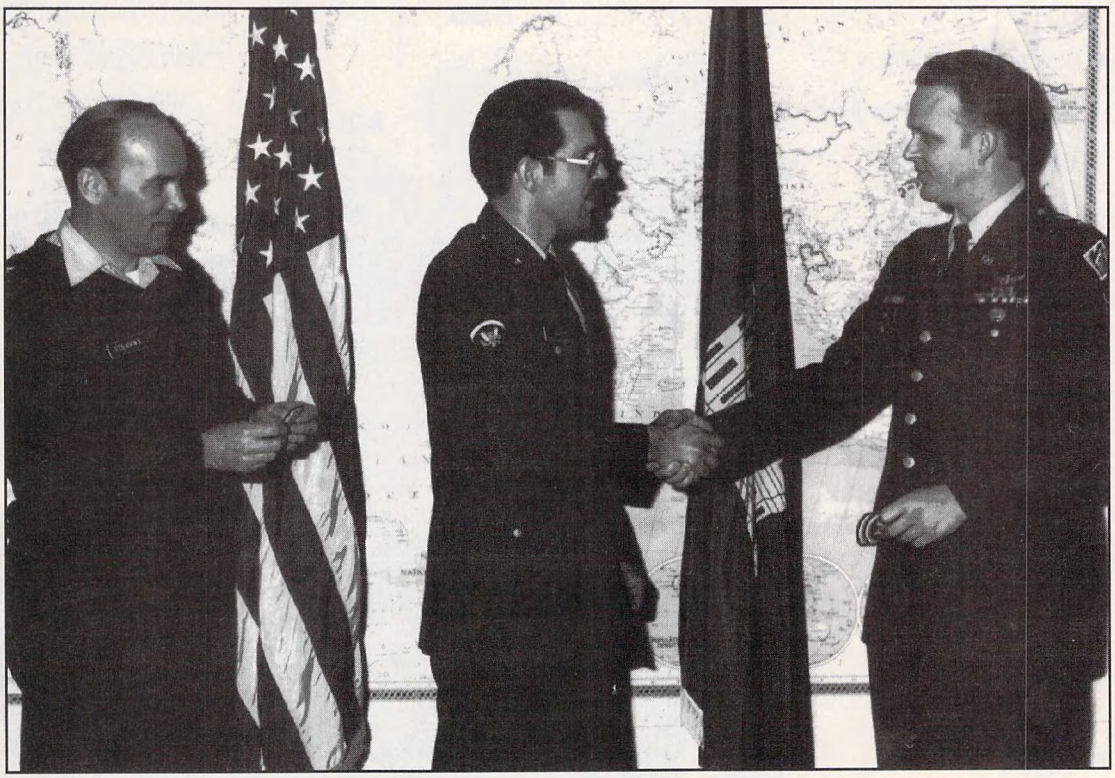
Harry at 12 years old



Harry in the Army at 19

When Harry found out that Richard Norris Williams was his real father, he immediately tried to find him by contacting the Army. Harry only had his birth father's name, that he was born around 1920 in Hawaii, he was an MP in the 508th Military Police in Munich after WWII and had a medical discharge because of asthma in the early '50s. Last Hilda heard, Dick was in Kent, Washington, where he'd bought a gas station. Frustrated with dead ends, Harry gave up.

Then along comes me, who loves a worthy challenge. I told Harry that if his father could be found, we'd give it our best shot using all the computer resources available. If Dick was no longer alive, at least we could find out when he passed away, and if he left behind any children...or was survived by brothers and sisters.



Harry (far right) in March of 1982

I had a fantasy of bringing these two men together after all these years...46 of them to be exact. Dick would surely be proud of his son, who had 25 years of distinguished service in the Army, and had received the Bronze Star, The Meritorious Service Medal and the Legion of Merit. The last time Dick saw Harry, he probably thought his little son would grow up as a German citizen, and that would be that. How interesting to find out that his little Harry became a citizen of the United States, a Vietnam vet who became career military, and is completely fluent to read, write and speak undetected as either a German, or an all-American good ol' boy. (He even likes Country music, gag me!) Can you blame me for wanting to go on the mission to find Richard Norris Williams? Where is he?

Of course, I went online and searched the member lists, with no luck. Then, I began posting messages requesting information on his whereabouts everywhere I could...in the genealogy forums on Genie, Prodigy, Delphi, AOL and CompuServe, and as many of the appropriate newsgroups and mailing lists as I could find on the Internet. So far I've received a lot of helpful suggestions. One person even sent me a file, listing the names of people who were born from 1916-1925, and who had died. There were two Richard Williams' who had the correct birth year, but this list had no middle names. I'm hoping neither one is Harry's father. I've also been given the phone numbers and addresses of several agencies that keep national lists of information, like phone numbers, birth records, and so on. It's going to be a difficult search, unless I get very lucky, and someone contacts me online with hard information on Mr. Williams' whereabouts. As of this writing, I still don't know where he is.

I also spoke to Harry's mother Hilda on the phone, to see if she could remember anything that would help me. I apologized to her, if I was invading her privacy, and she laughed, and said, in a heavy German accent, it was okay with her if Harry and I wanted to find Dick. Hilda sent me pictures of herself as a young woman, Harry as a child and her father Ludwig, in his 40s. She told me how much Harry meant to Ludwig, who died when Harry was 16. Luckily, Harry's stepfather was often stationed in Germany, and the family (Hilda had four more children) was in Munich quite often; Harry often spent extended visits with his grandfather. But Hilda didn't remember much more than what she told Harry, it had been over 40 years after all...and Harry's stepfather, who Hilda divorced when Harry was 30, was to blame for the break in communications between Hilda and Dick's mother, who died without ever seeing her grandson. I asked what Dick was like, and she said all she remembered was that he was tall, and a very nice man.

I was lucky to have had a chance to meet Harry in person, who is a dead ringer for his grandfather, Ludwig. My first impression of Harry? He was tall...and a very nice man.

(If you have any information on the whereabouts of Richard Norris Williams, please contact me on Prodigy at XHBG67A, CompuServe at 71562,407 or the Internet at **phlegar@delphi.com**) ◆

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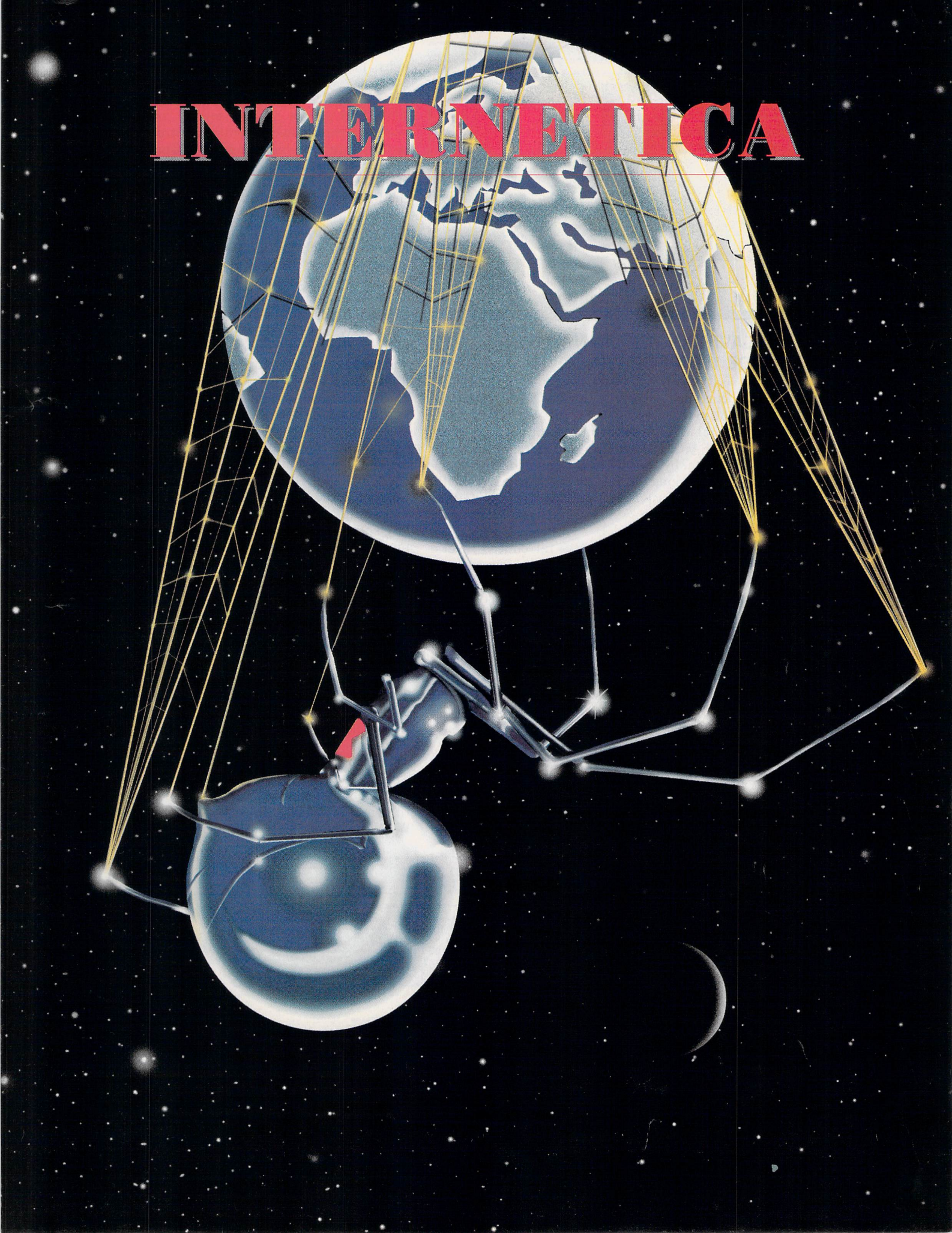

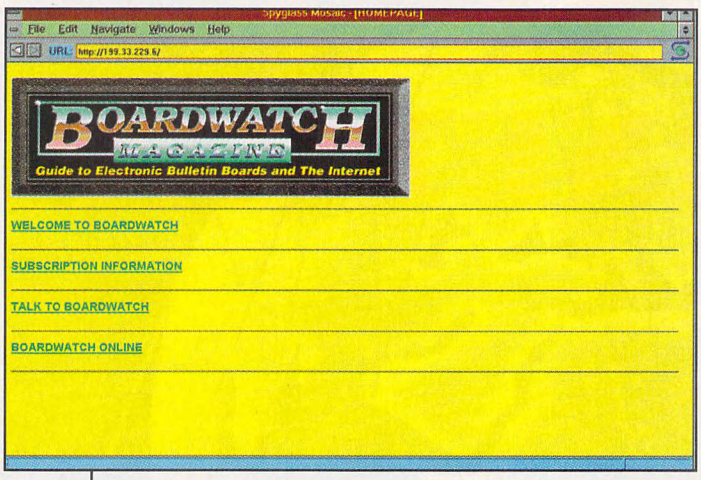

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WEAVING YOUR OWN WORLD WIDE WEB FOR WINDOWS

The current rage on the Internet revolves around a not so new development, the World Wide Web, and the relatively newer one, a software program titled MOSAIC. Originally released as a free software program by the National Center for Supercomputer Applications (NCSA) at the University of Illinois, MOSAIC provides a multimedia interface to the World Wide Web.

The World Wide Web itself was introduced several years earlier at the University of Cerne Switzerland. The basic concept revolves around the concept of hypertext. Hypertext has had a varied history as a kind of text presentation with "links" to other documents. The basic concept is of a heavily cross indexed document to other documents, such that if you wanted to know a bit more about something mentioned peripherally in a text article, you could click on that part of the text and it would bring you to a more specific article more particularly on that subject. In this way, you could navigate through a database of information in a more useful fashion.

The World Wide Web appears to follow this, but it has added a significant new dimension that may not be immediately obvious. It can actually link you not only to a different document, but the document can be located on any computer, in any city, in any country, on any continent, on the planet - that is similarly equipped with World Wide Web software.

The result is that you can develop a document with links to other existing documents maintained by anyone else in the web, and if you as a caller click on that option, you are essentially disconnected from my site, and reconnected instantly and quite transparently to the other site and view that document.

Mosaic, which is available for Windows, Macintosh, and UNIX X-Windows, puts a very pretty face on all of this with fonts, graphics, photo-images, sound clips, video clips, etc. all in a multi-media presentation. It is quite flexible in that you can plug various players into it to actually display the video, play the sound, etc.

NCSA has licensed the Mosaic software, at about $100K per pop we hear, to several commercial software companies, and several are introducing Mosaic implementations including Spry, Quarterdeck, and others. Mosaic has quite taken the Internet by storm, and is the most demonstrated application of the Internet at this point.

The history of videotext or indeed any type of pure information delivery has almost no history of widespread success. In fact, most commercial successes online almost always revolve around people in communication with people, not people in communication with databases or other information sources. But WWW and Mosaic seem to have sufficient flexibility to accommodate more robust communications, and could grow into more of that. In fact, one of the items you may see on a World Wide Web page is a place to click on to telnet to a service, retrieve a file by ftp, send an e-mail message, and conceivably do anything you can do on the Internet anyway. So Mosaic and WWW are shaping up as the graphic interface for the Internet.

Currently, the interface is a little slow. Sound files, video clips, and even graphic images tend to be largish, and can take from several seconds to several minutes to download. So on a limited bandwidth SLIP or PPP connection, some documents may be gruesome to deal with. But the commercial versions seem to be trimmed up a little better for speed, and bandwidth follows the inexorable path it always has, toward more speed. And we're beginning to see home pages that do seem designed with some level of consciousness regarding the speed issue.

There is some terminology to deal with. The HOME PAGE is the top level document at a particular site. In Mosaic and some of the other interface packages, the site is designated something like **http://www.boardwatch.com/boardwat.htm**. HTTP is the HyperText Transport Protocol, and is more or less meaningless in a technical sense. It is just a connection to an Internet Protocol address, usually at port 80, the WWW default, and is used more to indicate a web

Welcome page on WWW for Boardwatch Magazine
http: //www.boardwatch.com/boardwat.htm

site as opposed to an ftp or telnet or gopher site. The www.boardwatch.com is simply a domain name corresponding to the proper IP address. The convention of adding WEB or WWW to the front of your normal domain address is becoming somewhat common. BOARDWAT.HTM would be the initial document retrieved on connection, and hypertext markup language documents conventionally carry the extension .htm.

Documents are formatted using HTML - HyperText Markup Language, a subset of SGML, or Standard Generalized Markup Language. All HTML is SGML. All SGML is NOT necessarily HTML. This is ASCII text with formatting strings in it. These strings are a bit more flexible than just fonts, bolds and italics. They can be used to point to another address and document, another file, a telnet address, or even a software program that allows you to fill out a form, make a database entry, or whatever. Links to other documents are termed Universal Resource Locators or URLs.

Mosaic has caught on very well, and soon there won't be a TCP/IP package for Windows without it. Clearly it will be a very standard tool on every desktop that has an Internet connection of any type. IBM is even including it with the next version of the OS/2 operating system, currently code-named WARP. It will include TCP/IP, some standard tools, a SLIP connection to IBM's own service, and Mosaic.

So the current rage is how do I set up my OWN web server, have my own home page, for my own business. Basically this all comes back around to running your own BBS. The stock answer is to run a Sun Workstation on the Internet and the webserver software. As always, we wanted to know what it would take to devise the tools to do this on the cheap from a cheap PC and still make it work. The answer was surprising. It's already done.

The heart of this surprising development once again turns out to be the Winsock concept. NetManage developed this concept of a Windows Sockets Application Program Interface using Microsoft's Dynamic Link Library (DLL) concept. The result was WINSOCK.DLL, a TCP/IP stack that can access the Internet through SLIP, PPP, or a LAN connection to the global Internet. Application programs do not need to deal with the vagaries of TCP/IP at the gruesome level.

WINSOCK won very big almost immediately. Peter Tattum released a free WINSOCK called Trumpet, but almost all of the commercial software guys have their own WINSOCK.DLL as well. It is the way to do TCP/IP from an IBM compatible PC.

The current Winsock specification is version 1.1. It is available to anyone at no charge. FTP to **ftp.netmanage.com**. Change directories to **/pub/win_standards/winsock/winsock1.1/** and get **winsock.ps** (very nice postscript formatted document) or **winsock.doc** (plain ascii). With this document and a copy of Microsoft's Visual C++, writing Internet applications gets to be pretty trivial, and about the time most of the shareware programmers on the planet figure that part out, we may see a slew of new Internet applications that we can only ponder and surmise about at this point. It should be quite exciting.

One of those who did was Gustavo Estrella, an employee of Groupe Bull in Billerica Massachusetts (**estrella@cass.ma02.bull.com**). Gus wanted to learn how to use Visual C++, WWW and Winsock, and in doing so wrote a program he calls SerWeb, a World Wide Web Server for Windows 3.1 and NT. It is currently in version 0.3, it's free, and it comes with source code that demonstrates the whole concept and the use of Winsock. Mr. Estrella professes little ongoing interest in the project, and doesn't have any current plans for improving it much. But it is available in the file SERWEB03.ZIP.

And we found that it works. You can have your own World Wide Web server under Windows, make your own home page, and allow up to about 10 people to access it at the same time, using nothing more than a PC with Windows, Winsock, and SerWeb. The basic requirements:

1. A full time connection to the Internet. Our LAN sports a little 56 KB link to Rocky Mountain Internet.

2. An IBM compatible PC. We used a limp little 386-40MHz. This would all probably work better on something with more horsepower. But the system should probably be dedicated to the function, and it was what we found laying on the floor one morning with no Boardwatch staffer defending it. It must of course be connected to the LAN.

3. The following software:

Microsoft Windows version 3.1
WINSOCK.DLL
SerWeb version 0.3.

The WINSOCK.DLL must be installed and working properly with other applications. This IS actually the most challenging part. Most of the Internet configuration items go in this program's configuration. It is actually pretty doable, but can be the most confusing part of the process.

4. An HTML Document.

The server basically sends things out the port in response to caller commands or directives IN the document itself.

Server installation is actually pretty simple. We had to define 199.33.229.6, one of our Class C addresses, as the server, but the entire documentation for SerWeb prints out to two pages. Gary Funk, our Guy Who Does Technical Stuff (GWDTS), actually did modify SerWeb so it would load the top page of the document on connection, so callers didn't have to actively specify the particular document in Mosaic, but other than that, it just works.

The program actually ISN'T a complete implementation of the webserver concept. There are activities in a webserver that provide links to other programs or forms for example, that SerWeb doesn't actually incorporate. But it's a start. You can specify the number of simultaneous users, the default directory where the files can be found, and the IP address and port number. But it does provide a basic web server function from a Windows PC on an Internet connected LAN. And conceivably, you could connect this to a dedicated SLIP account and allow a couple of people to use it as well.

The real work is in creating the document itself. Jeff Rouyer from our art department recently won an award for an animation thing he does as a hobby, so we turned him loose on what was available to edit HTML pages. His resulting hot list included:

HYPEDIT.ZIP - HyperEdit version 0.4a - Stephen Hancock (**s.hancock@info.curtin.edu.au**)- Limited freeware - a small HTML editor for Windows and easy to use. Uses ToolBook. A web server is available at **http://info.curtin.edu/computing/package/hyperedit/home.htm**. Latest version available by ftp from **info.curtin.edu.au** in **/pub/internet/mswindows/hyperedit/**.

HTMLASST.ZIP - HTML Assistant version alpha 0.25. - Howard Harawitz (**harawitz@fox.nstn.ns.ca**) - shareware - another HTML editor for Windows - NOT fun to use.

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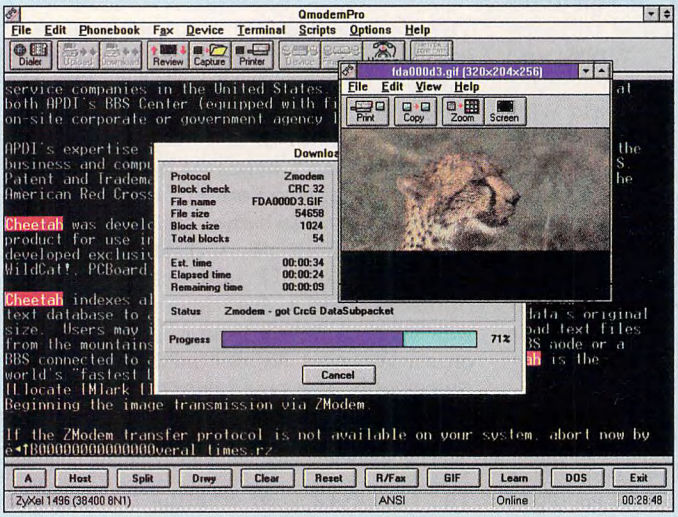
Cheetah also performs phase and proximity searches. Users can specify word proximity within a paragraph or sentence and the file viewer conveniently highlights all found text.

Unlike other full text searching software, Cheetah was specifically designed for BBSs. Cheetah keeps track of users' time left on the BBS, mode settings, modem status and even allows users to download their search results using any compression software they choose.



Cheetah handles text and images — newsletters, magazines, even government regulations!

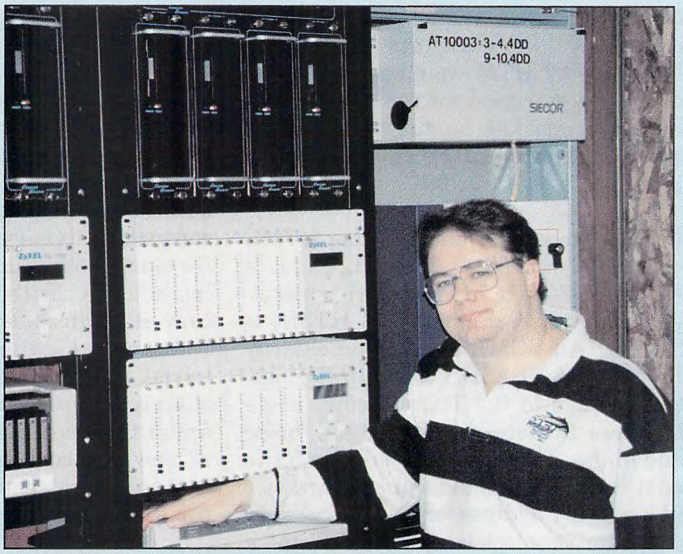
Cheetah is available in both serial port and Digiboard versions and works out of the box on Novell networks. Cheetah comes with an unlimited user license per BBS.

New Cheetah 1.5 version now shipping

- Images, GIF files
- Document Date support
- Sysop Configurable menus
- Auto open databases
- Menu-driven maintenance program
- Usage reports
- Unlimited hit lists
- Open multiple databases
- RIP support

Cheetah 1.0 can be purchased at 50% off while supplies last.

So if you work for a corporation, association or government and run a BBS, or just have the task of building one, call APDI at 1-800-785-APDI and find out more about Cheetah's ability to give your users what they need.



Mark Burnett at APDI's BBS Service Bureau

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Companies looking for a serious BBS company to provide a wide range of services are choosing APDI. APDI is devoted to providing professional BBS services to corporations, associations and government agencies throughout the United States.

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HTMED09.ZIP - HTMLEd version 0.9a - Peter B. Crawshaw (**pcrawshaw@mta.ca**) - shareware - Windows HTML editor for Windows - OK to use, but you can't ever find what you used it for.

ANT_HTML, CU_HTML, and GT_HTML - Add-on macros for Microsoft Word for Windows that makes it easier to convert Word documents to HTML with varying degrees of success.

HOTMETAL.EXE- SoftQuad HoT MetaL for Microsoft Windows.

The last is the one that appears to have stuck on Jeff's disk drive. This software was created by SoftQuad Inc. of Toronto and seems to be the current Windows HTML editor of choice. It is freely distributed as a service to the community of HTML users, for academic, research and internal business users. It is as professional a package as we've seen freely distributed. It is 1.3 MB in size in a self-extracting file titled HOTMETAL.EXE. It includes a postscript formatted manual of nearly a hundred pages that featured a pretty nice design and we found quite informative about HTML in general and of course the use of the HoTMetaL editor itself. It was certainly better documentation than you get with most shareware/freeware programs. But the company does offer a professional version you can upgrade to if SGML/HTML gets to be important. The pro version includes manuals, support, bug patches and upgrades, a spell checker and thesaurus, and a rather interesting Import/tidy-up feature that fixes bad HTML files when imported. It's priced at **$195**. But the free version is quite sufficient to do documents and the manual that comes with it in postscript format is pretty good.

The edge in HoTMetaL is not only that it does allow you to create HTML documents, but it contains some rule checking algorithms that prevent you from HTMLing yourself into a corner you can't get out of. HTML documents do require some structure to work with all servers and all Mosaic programs, and given just a little leeway, creativity, and imagination, you can hose things up pretty well if that's your mission. HoTMetaL strongly pushes you toward making a WORKING document that can be viewed. SoftQuad, Inc., 56 Aberfoyle Crescent, Suite 810, Toronto, CA M8X 2W4, **(416)239-4801** voice; **(416)239-7105** fax; Internet: **hotmetal@sq.com**.

A connection to the Internet of sufficient bandwidth to actually service multiple callers transferring GIF images, videoclips, soundfiles and so forth is not quite trivial. A 56 kb link is running **$500** or so a month it would appear and a 1.544 Mbps T1 link can range from **$1000** a month to about **$3500** monthly. But if you do have such a connection, a modest web server can be added for certainly less than **$1000**, and the bulk of the time and effort devoted to the actual design of the document. Our web server is at **http://www.boardwatch.com**, and we do intend to put the full text of all future issues online there.

SoftQuad's HoTMetaL, HTML editor of choice

NETMANAGE RELEASES FREE CHAMELEON SLIP SAMPLER

The heart of the Internet currently is a networking protocol usually referred to as TCP/IP. This is the Transmission Control Protocol/ Internet Protocol used as the lingua franca to link some 3.2 million hosts now in a global Internet.

Much of the Internet was made up of mainframe and minicomputers, the latter often running some implementation of UNIX. But the interest in the past couple of years, and certainly the focus in Boardwatch, has been in connecting personal computers to the Internet in useful ways.

NetManage of Cupertino California has plowed some significant ground in the area of TCP/IP for personal computers. The earliest packages that would allow a DOS machine to participate on a TCP/IP network came with 4-inch binders of documentation, did little, did it slowly, and did it only for the few that could decode the documentation sufficiently to set a few hundred utterly incomprehensible configuration items 100% correctly.

NetManage developed a package for Microsoft Windows they called Chameleon. It was much easier to install, and incorporated much of the TCP/IP stack in a Windows Dynamic Link Library or DLL that was patterned somewhat after the Berkeley Sockets concept for UNIX systems. The WINSOCK.DLL contained most of the hard parts of dealing with TCP/IP, and individual application programs such as telnet, ftp, ping, smtp mail, and so forth plugged into WINSOCK and used its resources. This made application development much easier. It also broadly reduced the memory requirements for the TCP/IP stack which in the past had been done as a DOS program or as a Terminate and Stay Resident (TSR) you loaded before Windows. Finally, it gave any windows application theoretical access to the TCP/IP pipe. The WINSOCK concept will probably be regarded as the most seminal development in TCP/IP access for IBM compatible computers, and the company received a Dvorak Award for Telecommunications Excellence at the 1994 ONE BBSCON.

Their full Chameleon package has set the water mark for suites of applications for TCP/IP under Windows. Right now, a slew of new entries is hitting the market and the choices promise to be much better in the future. But previous to this point, Chameleon would work, and almost everything else would simulate working - for a bit. As such, Chameleon has become the choice for Windows TCP/IP.

But NetManage has faced one of the conundrums of communications software in the 1990s - pricing. It is probably one of the most difficult issues faced because of the increasingly broad variety of customers who all want the same product, for very different reasons and needs, and have very different budgets to deal with. Chameleon, at **$400** per user, is not actually out of range of the traditional corporate environments that use TCP/IP to connect offices, access UNIX services from Windows PCs, and so

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forth. To the increasing ranks of individuals with a PC and modem, who want to play with a dialup Internet account, it borders on the preposterous - at least for casual use.

On July 12, NetManage introduced some most generous terms to introduce such callers to their line of software. They made demonstration versions of Chameleon available at NO CHARGE by FTP. And they did this in two very interesting ways.

The NetManage SAMPLER package contains some basic elements of Chameleon such as telnet, for logging into systems on the Internet, ftp, the file transfer protocol application used to retrieve files, ping, a little utility used to see if a site is up, and mail, a basic electronic mail package. The package is fully functional, and realistically these are the CORE applications most callers need - a good basic selection. The program uses WINSOCK. It is crippled in that it will ONLY work with a serial port and modem to access a Serial Line Internet Protocol (SLIP) or Point-to-Point Protocol (PPP) dialup account - precisely the low end of the market but the most common need among the online community. While Chameleon will work best with a TCP/IP LAN through a LAN card, individual callers from home almost never have such access anyway, they need a SLIP package, and the sampler actually works fine for this application as it is.

Additionally, many additional shareware program applications for TCP/IP are widely available and almost universally use WINSOCK, so they can easily be added to the NetManage sampler.

To get the NetManage Sampler package, **ftp to ftp.netmanage.com**. Enter the command **cd/pub/demos/sampler**. Then enter get **sampler.exe**. This is a 759KB file that is self extracting. When you run it, it extracts all the component files including some basic documentation.

The program installs reasonably easily, the configuration program is also included. And it allows you to use a SLIP account to do all the basic things such as ftp, telnet, send and receive mail. For the increasing number of bulletin boards that are moving into providing Internet access, and already in some cases SLIP accounts, this provides a good package to get their callers started with at no cost for the software. The package is free for educational and personal use, but may not be copied or redistributed.

NetManage also has provided a demonstration package of the FULL Chameleon product. It is also available on **ftp.netmanage.com** in **/pub/demos/chameleon** and consists of a bulkier set of four .exe files. This version WILL work on a LAN, but will only operate for 30 days before it disables. In this way, if you do run a TCP/IP LAN and want to try Chameleon out before ordering the full package, you can.

Finally, they do have a thing they call SOCKET WRENCH in **/pub/demos/sockwrench**. This is actually a benchmark performance program to test various winsock.dll implementations for speed primarily. You can use it to compare a shareware winsock such as TRUMPET with the Chameleon WINSOCK.DLL, ostensibly to demonstrate superior performance in the NetManage product. It would seem so.

These are fairly generous terms for a traditional commercial software package, almost shareware-like in some curious ways. But it may well work for NetManage. New entries in the market may appear to make it more competitive, but actually the number of new TCP/IP enthusiasts seems to be a function of how quickly new callers can get through the learning curve of getting onto the Internet and doing useful work. So the pie is growing larger at such a rate that market share is a little bit of a cloudy issue at this point, but anyone that can help educate the market probably wins. Those users for whom this becomes integral to their business and activities would probably opt for the full package and documentation pretty quickly, and the rest weren't going to spend $400 on a package in any event. It will certainly spread the concept of Chameleon as the package of choice fairly rapidly.

In the process, it puts a capable tool in the hands of a lot of Internet novices at the always affordable price - free. We would echo Dvorak's kudos, in this case for the generosity of spirit, as well as for the technical merit - and generally our observation is that the combination of the two usually leads to cash success in the marketplace. NetManage, 10725 North De Anza Blvd., Cupertino, CA 95014; Voice **(408)973-7171**; Fax **(408)257-6405**; BBS:**(408)257-3794**; Sales: **sales@netmanage.com**; Support: **support@netmanage.com**

APPLE ANNOUNCES COOL TOOL AWARDS FOR INTERNET PROGRAMS

The Advanced Technology Group of Apple Computer announced on September 30 awards to eleven individuals they term "Cool Tool" awards. The awards are designed to recognize programmers whose contributions have enabled Macintosh users to more easily or productively navigate the Internet.

"Access to the Internet has been made simpler by the efforts of many programmers, many of them working with little monetary reward - to design and distribute a wide variety of tools to navigate the millions of files and thousands of networks that comprise the Internet," said Rick LeFaivre, vice president of Apple's Advanced Technology Group. "Through the creation of these 'Cool Tool' awards, our goal was to recognize the work of some of these unsung heroes who have made very significant contributions in making it easier to navigate the Internet."

Each Cool Tool awardee will receive an Apple Power Macintosh 7100 from Apple. The winners include:

The Internet Society, for its efforts to foster a global environment conducive to the easy exchange of information and the rapid development of standards and new software. Internet Society, 12020 Sunrise Valley Drive, Suite 270, Reston, VA 22091; **(703)648-9888** voice; **(703)648-9887** fax; E-mail: **amr@isoc.org**

Steve Dorner of QUALCOMM Incorporated in San Diego, California, for Eudora, an electronic mail client for Internet users. Telephone **(800)2-EUDORA**. E-mail: **sdorner@qualcomm.com**

Chuck Shotton, Houston, Texas, for MacHTTP, a World Wide Web server for the Macintosh. Telephone **(713)794-5650**. E-mail: **shotton@oac.hsc.uth.tmc.edu**

Peter Lewis, Perth, Western Australia, for FTPd, an anonymous file transfer server, and Anarchie, an FTP client to search for and retrieve public files on the Internet. E-mail: **peter.lewis@info.curtin.au.edu**

University of Michigan Weather Underground, University of Michigan, for Blue-Skies, a gopher client for browsing, viewing and reporting real time weather and environmental information in an interactive graphic and text format. Key contributors include

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Allentown 610 434-725
Altoona 814 949-972
Bellwood 814 949-972
Bethlehem 610 434-725
Cresson 814 949-972
Dauphin 717 234-143
Easton 610 434-725
Halifax 717 234-143
Harding 717 883-012
Harrisburg 717 234-143
Hershey 717 234-143
Hollidaysburg 814 949-972
Jersey Shore 717 321-991
Kingston 717 883-012
Loyalsockville 717 321-991
Mechanicsburg 717 234-143
Middletown 717 234-143
Moosic 717 883-012
Nazareth 610 434-725
Oval 717 321-991
Penn Hills 412 566-137
Philadelphia ***215 969-691***
Pittsburg 412 566-137
Pittston 717 883-012
Reading 610 375-841
Scranton 717 883-012
Taylor 717 883-012
Trout Run 717 321-991
Tyrone 814 949-972
Wilkes-Barre 717 883-012
Williamsport 717 321-991
Wyoming 717 883-012

RHODE ISLAND
Providence 401 431-205

SOUTH CAROLINA
Columbia 803 779-446

TENNESSEE
Apison 615 267-011
Arlington 901 794-122
Blountville 615 323-660
Bristol 615 323-660
Charleston 615 267-011
Chattanooga 615 267-011
Collierville 901 794-122
Dayton 615 267-011
Decatur 615 267-011
Johnson City 615 854-958
Knoxville 615 689-997
Memphis 901 794-122
Millington 901 794-122
Nashville ***615 256-111***
Rosemark 901 794-122
Shelby Forest 901 794-122
South Pittsburg 615 267-011
West Memphis 901 794-122

TEXAS
Aldine 713 623-792
Aledo 817 275-702
Austin 512 480-063
Corpus Christi
CDS BBS ***512 887-078***
CompuBasix ***512 994-830***
Dallas
Garbage Dump ***214 644-606***
The Coffee Shop ***214 369-357***
Fort Worth 817 275-702
Houston 713 623-792
Mesquite 214 630-024
Pereland 713 623-792
Plano 214 630-024
Richardson 214 630-024
San Antonio 210 496-222

UTAH
Salt Lake City 801 328-114

VIRGINIA
Alexandria 202 393-556
Arlington 202 393-556
Ashland 804 648-240
Chesapeake 804 622-822
Chester 804 648-240
Fairfax-Vienna 202 393-556
Falls Church 202 393-556
Herndon 202 393-556
Highland Springs 804 648-240
Manakin 804 648-240
Midlothian 804 648-240
Norfolk 804 622-822
Portsmouth 804 622-822
Richmond 804 648-240
Virginia Beach 804 622-822

WASHINGTON
Auburn 206 277-805
Bellingham 206 733-910
Des Moines 206 277-805
Kent 206 455-347
Olympia 206 786-100
Puyallup 206 924-071
Renton 206 277-805
Richland 509 946-414
Seattle 206 455-347
Spokane 509 536-160
Tacoma 206 924-071

WISCONSIN
Brookfield 414 291-551
Menomenee Falls 414 291-551
Milwaukee 414 291-551
Waukesha 414 291-551

students Alan Steremberg, Derek Price, Chris Schwerzler, and Michael Kamprath. The Weather Underground is directed by Prof. Perry Samson with technical direction from Jeff Ferguson. Telephone **(313)936-0491**. E-mail: **blueskies@umich.edu**

John Hardin of EINet, Austin, Texas, for MacWeb, a hypermedia World Wide Web client for the Macintosh. Telephone: **(800)844-4638**. E-mail: **macweb@einet.net**

National Center for Supercomputer Applications in Urbana, Illinois, for Mosaic for the Macintosh, the crossover application that has helped to spur interest in the Internet for many commercial and non-commercial users. Telephone: **(217)244-3473**. E-mail: **mosaic-mac@ncsa.uiuc.edu**

Aaron Giles of Cornell University Medical College, New York, New York, for JPEGView, a graphic utility that allows the user to view compressed images on the World Wide Web, Gopher or those retrieved from anonymous FTP servers on the net. Telephone: **(212)410-2781**. E-mail: **giles@med.cornell.edu**

John Norstad of Northwestern University, Evanston, Illinois for Newswatcher, a Usenet news reader. E-mail: **j-norstad@nwu.edu**

Cornell University, Ithaca, New York, for CU-SeeMe, a conferencing tool that is being used by elementary schools, individuals, and other organizations around the world for low-cost video communications. Telephone: **(607)255-7566**. E-mail: **r.cogger@cornell.edu**. Files may be ftp'd at **gated.cornell.edu** in the **/pub/video** directory.

University of Minnesota, Minneapolis, MN for the TurboGopher client and GopherSurfer server. Internet Gopher is a distributed system for campus and world information which includes local information as well as links to other Gopher servers. Telephone: **(612)625-1300**.

Apple commissioned a panel of Apple employees to seek out and critique currently available tools for Macintosh on the Internet and select awardees. More information from Steve Cisler at **sac@apple.com.**

GOVERNMENT PRINTING OFFICE PUTS CONGRESSIONAL BILLS ONLINE

The U.S Government Printing Office (GPO) now has all Congressional Bills available online. The Congressional Bills database contains all published versions of House and Senate bills introduced since the start of the 103rd Congress.

The Congressional Bills database joins the official Government versions of the Congressional Record and the Federal Register that have been offered in electronic format over the Internet through the GPO Access service since June 1994.

The Bills database is updated by 6 a.m. each day bills are published. Bills are available as ASCII text files and in Adobe Acrobat Portable Document Format (PDF) file format. Users with Acrobat viewers will be able to display and print typeset page facsimiles.

The Federal Register and the Congressional Record are available online by 6 a.m. and by 11 a.m. e.s.t. daily, respectively. Documents in the Register and Record databases are available as ASCII text files with all graphics in TIFF file format.

Organizations or individuals may subscribe directly from GPO for each of the three databases for **$35** per month, **$200** for 6 months, or **$375** for 1 year for a single workstation. Special rates are available for multiple workstations.

Information about how to subscribe to the Congressional Bills, Record, or Register databases is available by calling GPO at **202-512-1530** or by fax at **202-512-1262**. Internet E-mail should be sent to **help@eids05.eids.gpo.gov.**

Users with full Internet access and local WAIS client software will be able to receive both ASCII text and all graphics as individual TIFF files or PDF files in the Congressional Record, Congressional Bills, and Federal Register databases. This is the first time that both text and graphics have been made available electronically via an online service. GPO's customized WAIS client software, a user-interface program specifically designed for GPO's application, is available from GPO for **$15**.

Those who do not have full Internet connections can access ASCII text files, but not the PDF files or graphics, by using a phone modem to dial directly into GPO without additional software. These subscriptions provide for unlimited use for a stand alone workstation or an individual SWAIS user ID.

The Congressional Bills and the Record and Register databases are also available for free electronic searches to walk-in patrons of many of the Nation's 1,400 depository libraries under a "GPO Access" program authorized by law and launched in June 1994. The Depository Library System includes academic, public, law, and Federal libraries. There is at least one Federal depository library in every Congressional district.

The Superintendent of Documents is the official source for the sale of information published by more than 100 Federal agencies. Approximately 12,000 books or documents, 600 periodicals, and a growing number of CD ROMs, diskettes, and online services are available.

COMMERCIAL INTERNET EXCHANGE COMES UNGLUED

by Gordon Cook

WASHBURN WILL PROBABLY GO TO MECKLERWEB, ROUTING FILTERS POSTPONED, ADAMS RETAINS BOARD SEAT, MEMBERS MEETING CONCLUDES AMIDST ACCUSATIONS OF ANTI-COMPETITIVE ACTIONS BY CIX ESTABLISHMENT

THE DRAGON SLAYER BECOMES A DRAGON

This is the story of how an organization created to save the Internet from a government approved give-away in only 3 years became embroiled in accusations that it was operating against the interests of its own members. The original dragon slayers turned into dragons themselves. It has long been a part of human nature to try to control events by saying one thing and then meeting out of sight to do another. This happens sometimes too often in business and, in a hierarchical non networked environment; people can get away with it. Given the flat and open nature of the Internet, imposing this mode of operation becomes somewhat difficult. Networking of any kind breaks hierarchies and sheds light on back room deals. The Internet can protect its own interests in part because

it is very difficult for people to operate in secret for very long.

However in the current gold rush atmosphere it seems that major players are slow to learn these lessons. They do deals and hope they can reap the benefits before they are found out.

The first deal happened in late 1990 when the National Science Foundation gave away the network backbone to Advanced Network and Services. ANS had imperial ambitions and Al Weis made it very clear to us within 60 days of his incorporation in September of 1990 that he didn't have the time to use a public forum on the network to answer questions about his plans. As a result ANS became immediately feared and mistrusted and on February 14 1991 at our OTA forum for network providers, Bill Schrader, Rick Adams, and Susan Estrada announced the Commercial Internet Exchange (CIX). Under the aegis of the CIX other Internet providers banded together to ensure open peering without settlements. This was a response to ANS's self aggrandizing vision. ANS's unwillingness to deal openly with the network community caused it to become openly reviled and scorned and, more than three years later, instead of owning the kingdom it has been pushed to the sidelines.

Meanwhile, by the end of 1993 the CIX had grown to 24 networks. When by means of filtering action against ANS, the CIX forced ANS to join and there began to be some disgruntled discussion about the definition of a reseller. Anyone who resold, it seemed, was now defined as a network and should join the CIX at the standard yearly fee of $10,000 no matter whether it was AT&T or a bedroom provider. Telling evidence at the time was that not only did the CIX not ever answer any question asked of it in public forums like com-priv, but that it didn't even answer its member's questions. When the CIX also maintained that every provider no matter how small was a network and had to join the CIX at a fee that would not be cut from $10,000 for very small providers, some began to see the CIX as raising barriers to entry. Public outcry for a tiered fee structure was great. Bill Washburn, the CIX Executive Director pleaded for the board to implement such a structure. He was turned down and eventually told that he would be fired if he even suggested it one more time. There were signs emerging that the CIX was accountable to no one but itself.

THE CIX EMBATTLED CLAMPS DOWN

In the mean time two critical things were occurring. First the CIX grew in the first seven months of 1994 from 24 to 65 members. With a lot more money flowing into its treasury it was attracting a LOT more visibility. Second the policy of PSI and UUNET not connecting resellers (down stream providers), was challenged by Sprint which, during 1993, entered the market place in a major way. Sprint sold to anyone and everyone during a period of time when the number of small scale service providers increased probably ten fold. Not surprisingly Sprint got all the business and PSI and UUNET were stuck with expensive backbone to maintain and low customer growth. Sprint opened the barn door to competition for Internet access. Unless PSI and UUNet dropped their opposition to resale and emulated Sprint, they would loose major market share. Why they choose not to is not clear.

What it seems that they did choose to do is clamp down on what with Sprint had become the accepted practice of being connected to Sprint (who was a CIX member) being sufficient to grant downstream providers access to the CIX router and access to CIX connectivity and routing to all other CIX members. Sprint maintained that for it to force customers to join the CIX or deny them access to the CIX router would open Sprint to charges of restraint of trade. PSI and UUNET apparently then settled on a strategy of the CIX acting as an organization to block access to its services. In this they were supported by Nearnet and Susan Estrada, the other two board members. Sprint lost by a four to one margin on the implementation of the new policy. We were informed within three hours of the close of the meeting of what happened. The CIX members had to wait nearly 20 hours before a short message from Marty Schoffstall went out to the members' list to notify them of a major change of policy. It was also about two weeks before the Board published a new set of rules covering precisely who had to be a CIX member to get CIX routing and listing a $7500 flat fee for 1995.

This was still a sizable fee that would serve as a barrier to entry for the smallest providers which, with their opposition to resale, one could infer PSI and UUNet didn't want in the market to begin with. And with the imposition of routing filters set for November 1 the CIX was serving notice that it would make it difficult for a small new provider to connect their customers to the entire network. PSI didn't comment publicly, but UUNet's Rick Adams derisively dismissed complaints by saying that anyone who couldn't afford the fee was a hobbyist and that the CIX was not in business to humor hobbyists.

CIX Assets were a Cisco AGS+, 7000, and 7010 router in California, a Sun workstation running the CIX gopher at UUNet, and $250,000 in a bank account in Virginia. UUNet kept the CIX books. PSI ran the CIX router and was paid a fee for doing so. A direct attachment fee of $5,000 went entirely to PSI and $750 a month also went to PSI for each member that was backhauled to the CIX router by another network. Consequently the real cost of CIX membership varied from $15,000 plus the cost of a leased line to the router to $19,000 a year plus the cost of backhauling. Running the router was also beneficial to PSI because some foreign networks connected there became PSI leased line customers as a part of their connection process.

By the early days of August Joe Stroup of Phoenix Arizona and Karl Denninger of MCSNet in Chicago had begun plans for a return to the CIX's original principles in a new backbone service to be called Net99. Net99 would not prohibit resale and would seek settlement free peering arrangements with as many providers around the world as possible. It would have tiered membership fees.

SEPTEMBER 5 - ADAMS UNILATERALLY CHANGES CIX MEETING RULES

As August passed attention of those who had become upset with the CIX's attitude to its own members and to the rest of the net began to focus on the CIX's annual membership meeting to be held on September 14th in Atlanta. Rick Adams whose Board term was up and was acting as president of the CIX apparently was very interested in preserving his seat on the Board. Susan Estrada was not running. Eight people had announced candidacy for the two Board seats including Stroup and Denninger.

Washburn was taking reservations from CIX members as to how many people would attend the Sept. 14 meeting. People were buying non refundable airplane tickets, when suddenly with the press of the Send key on Labor Day, Monday September 5 the rules were changed by Rick Adams, the CIX President.

A message was sent on that date advising that only one representative from each network would be allowed in the meeting, and no guests or visitors allowed. It also included a list of members whose dues were currently paid.

To many members this was a signal that Adams would do whatever it took to hang onto his board seat. Some suggested that the sending of information on who was current on dues and who was not being sent to the entire membership list was an invasion of the privacy of other members. There were some notable members who had not paid dues - including Sprint, JvNCNet, and MCInet. By September 1 the CIX reportedly had more than 75 members. Yet only 45 were current in their dues.

To outsiders it hardly looked like a great vote of confidence. Some also wondered about the good judgment implied in publishing the number of the CIX's bank account. Finally, the decree that only one representative from each member organization could actually attend came across as a rather desperate attempt on the part of Adams to more easily control the meeting.

Washburn reportedly insisted on a reception for members and staff the night before as the only way to apologize to members for a critical change in the way the meeting would be run announced only nine days in advance. This insistence cost him dearly with the Board. When the fallout of complaints from Adams action began to settle; Schoffstall suggested that perhaps Washburn had dropped the ball. It was beginning to become apparent that if Washburn survived as Executive Director until the meeting, he'd likely be fired soon thereafter. On Thursday September 8 Washburn said that he guessed there was a 50/50 chance that the reception would be held. It seemed that Washburn was a man who took the purpose of the CIX very seriously and wanted to do whatever was necessary to make the CIX actually live up to the five clauses contained in its membership agreement. The board was now making it very clear that their view of the CIX was much more narrowly circumscribed. Washburn wondered what he had ever done to deserve the extremely unpleasant position in which he found himself.

SEPTEMBER 8 STROUP AND DENNINGER ISSUE THEIR REFORM PLATFORM

In the meantime; by late Thursday Stroup and Denninger were gathering allies for what had now become a political campaign to take over the CIX. Their allies included several other CIX members. Late on Thursday they posted the following indictment of CIX policy to the net and stated what they would do to change it were they elected to the vacant board seats.

TO ALL INTERESTED PARTIES:

As some of you are aware, the CIX (Commercial Internet Exchange) is holding its annual meeting next week. Two directors (out of five) have their terms expire at this meeting, and thus there will be elections.

Net99 and MCSNet have come to the conclusion that there are serious problems within the CIX that need to be remedied. While the recent routing policy decision was contentious, this was in no small part due to the fact that the effect of that decision did not meet with the bylaws and member agreement.

Rick Adams' recent activity in attempting to limit attendance to one representative per member organization, only six business days from the meeting, has had the effect of causing member organizations to expend money and travel planning effort for nothing — the CIX had asked for RSVPs about a month ago, MCSNet provided ours, and we received an e-mailed confirmation of our attendance.

This is but one example of the kind of capricious activity which has gone on, without check or balance, within the CIX board in recent months.

In fact, we believe that none of the AGREEMENTS which the CIX has made with its members are being properly fulfilled. To quote from the membership agreement:

CIX AGREES AS FOLLOWS:

1. To develop industry-wide forums for the consideration and development of industry related policy issues.

We have seen no activity of this kind by the CIX at all, and in fact, if anything, the activities of the board certainly have not had anything to do with industry input.

2. To discuss and consider issues that will improve the efficiency and interconnectivity of the members' use of public networks.

The recent actions by the board of directors, without further change in the fee structure, have actually served to the exact opposite effect. Further, no open discussion took place (except within the board) prior to the recent changes in policy and no formal poll was taken.

3. To support legislative goals beneficial to its members and the industry.

The sum total of the CIX's legislative presence and lobbying efforts in Washington, to date, has been zero.

4. To promote the greater connectivity of public networks.

Network blockage promotes greater connectivity

5. To provide operational, technical and administrative mechanisms to ensure fair and open communications among OSPNSP's open system protocol network service providers.

We have seen no evidence of these mechanisms and challenge the CIX board to produce even one example of same.

We feel that this kind of activity must stop immediately. As a result, Joseph Stroup and myself, Karl Denninger, are running for the two open board seats.

The message also included a nine-point platform promising no settlements connections, tiered membership structure, and significant congressional lobbying activity.

ADAMS WARNS CIX MEETING COULD BE CANCELLED

Denninger's message crossed the electronic wires at roughly the same time as the following message from Rick Adams:

"BEGIN FULL DISCLOSURE:

There is no defined procedure for elections. What little there is is in the bylaws.

END FULL DISCLOSURE."

It is unlikely that anything will be defined in advance of the meeting.

It is likely that the first item of business at the meeting will be defining procedures.

HOWEVER, if there is not a quorum present, the bylaws require that the meeting be adjourned to a later date. This is a real possibility."

To some this sounded like wishful thinking on Adams' part that the meeting not be held. More and more it seemed that he was running on emotion rather than rationality. People were offering the assertion that he had barred the CIX lawyer from attendance at the Atlanta meeting as proof for their conclusions.

PSI ACCUSED OF ANTI-COMPETITIVE MOVES AGAINST ASIAN INTERNET SERVICE PROVIDERS

Allegations were privately made that PSI had been using its technical control over the CIX router located in a WillTel POP to convince foreign CIX members to become PSI leased line customers. In this contest David Conrad; a representative of IIJ, a Japanese CIX member, published a message to com-priv and the CIX members list on September 10 accusing the CIX of acting as a direct competitor to International Service Providers in Asia and Europe, and using the membership fees of those same service providers to expand the CIX backbone into those areas to compete with them.

Conrad's remarks were apparently in reference to an August 24 presentation by Schoffstall in Tokyo on behalf of a Japan CIX or an Asia Pacific CIX. They were an addition to the concerns about how technical control of the CIX router could be used for its own advantage by PSI, a CIX board member. These concerns caused Dave Hughes to suggest to us that one of the first orders of CIX business ought to be to amend the by laws to prohibit board members from involving their companies in any monetary dealings on behalf of the CIX in order to avoid conflicts of interest.

Christopher Allen, President of Electriciti; a new CIX member from California seemed to echo Hughes' concern when he wrote to com-priv: "We waited 30 days for the official pronouncement of the last meeting. That kind of lag is excessive. The four ISP's represented on the board had 30 days lead time to plan and respond. That kind of action could potentially be used to give those companies a competitive advantage. Why not release board minutes right away to members?

"Ironically, one of the things that prompted my CIX membership was the interview with Bill Washburn in Internet World. I had been interested in joining the CIX for over a year, and the article helped get me off the fence. At this point I feel it was a puff piece. There is a real story here but it isn't being told in Internet World."

STROUP AND DENNINGER BEGIN PLANNING INSURRECTION

By September 8 Stroup and Denninger were launching (with the aid of several other CIX members) a plan for a political campaign to begin at Interop on Monday morning September 12. The strategy expressed was to lobby as thoroughly and methodically as possible as many of the CIX members for Stroup and Denninger's reform plan. Calling for the resignation of the entire board was rejected as too radical a move that would be likely to polarize the meeting too quickly. The question of asking for a vote of confidence in the board was considered before it was decided to focus primarily on winning the two board seats.

They decided to arrange for a CIX Reform hospitality suite and to advertise its availability as widely as possible. They would lobby CIX members with booths on the show floor. They would make lapel buttons announcing their effort and offer them to as many as would take them. Here's our story. Let me offer you a button. Put it on if you agree. If not put it in your pocket and think about what we are saying. They would make a list of CIX members to lobby-effective immediately. They would concentrate most of their efforts on those who they thought they could convince. At the meeting if they did not succeed in a motion to declare all board seats vacant and hence up for election, they would run Stroup and Denninger for the two open seats. When the meeting began everyone on their side would be wearing the button. Those wavering might look around and convert on the spot.

SUNDAY SEPTEMBER 11 - THE STAKES GROW HIGHER

By Sunday evening it became public that the CIX bylaws actually specified that ALL board members served for a total of three years from their first meeting and the feeling was pretty widespread that by its own charter, CIX was required to elect an entire new board of five members. Denninger was ready to use the above cited language to call for the resignation of the entire CIX Board. Starting with a no confidence vote, he wrote a scathing reply to Paul Vixie the California based DNS and Bind guru who had been defending the CIX board's position. We shorten his reply and tone down some of the earthy language.

Denninger started by explaining why he considered the CIX router to be no longer necessary.

"With a peering agreement that has some teeth in it as part of the membership deal, we have what we want. Interconnect points spring up on their own. The trick is to make sure they remain open and settlement free. Having two highly-overburdened routers in California (technically inaccurate; it's the T1s that are overburdened really) doesn't make for a settlement-free Internet, and never will."

Denninger dismissed the PACBell SMDS cloud the CIX was pledged to offer by asking what would stop the RBOC from metering it? MAE East would be preferable. He concluded: "Gents, this is about policy, not two little routers in California."

There are already several settlement-free interconnect points around the Internet. MAE-EAST, to which Net99 is attaching and the SWAB to name two. I'm about ready to fire up one here in my offices for open peering as well on a no-settlement basis . . . As soon as the physical plant work is completed here in Chicago at my offices the switch is going to be placed in the ON position. Come talk with us. It's show time. I have 18 CISCO and Wellfleet T1 capable ports available on my infrastructure right now without hard commitments. That's a lot of capacity. I have hardware and I know how to use it.

The people who want to do the NAP thing can do so. Hell, DC's is already stillborn. Who knows what the success of the others will be. I asked for a quote to connect to Chicago's over a MONTH ago, and still don't have it, and inside sources tell me it's because Ameritech can't make it work and has no significant customer base for the thing. It is entirely possible that these NAPs will NOT go online as scheduled if nobody wants to pay to connect to them.

Frankly, I hope they all die and the companies awarded them lose their asses — the fact that there is not a "no settlement/peering required" policy immediately turned me off to the idea. Frankly, I'll give no money to any of them unless there is a damn good business reason to do so, and arm-twisting isn't a good reason.

You know what? The Internet as we know it may die. And be reborn in a day.

I bet that if the NSF, the telcos and the NAPs "win" that people like myself, Joe Stroup, TLG in California and many others could set up a parallel structure in a couple of weeks and be right back on the air. Without settlements. I'll say

this — in whatever form necessary, I'll run the NOC for it. I'll operate it on a cost plus basis, make a little money, pay people decent salaries, and make damn sure the routing doesn't collapse. I've done it before on a national scale, and I can and will do it again. I'm a master at doing things for way below the cost of other organizations who claim to be able to do the same stuff.

Why would I be a crusader, you might ask? MCSNet is all the vested interest I need to make sure this happens.

Net99 is going to make certain that resellers have a reasonable way to get connected. Those little resellers will make damn sure that the nasty jerks can't win, because they can't touch the cost models we have. You just can't when you have to pay 5,000 people!

Fact is, if the telcos do the settlement thing the big companies and education sites will have to buy two connections — one to the evil empire, the other to Net99. So? How long will the evil empire survive? It won't take long before those companies and educational sites realize there is no reason to pay for two connections instead of one. Since one gets everywhere, even to those little bitty BBS systems, and the other doesn't...

CIX is not a packet clearinghouse right now. It just isn't. It can't be for 90% of the ISPs out there, because it's too damn expensive to get to. Sure, you can cut some favors for some ISPs. But that is an anti-trust problem; giving competitive advantage to one over another, especially if the policy makers and benefactors are the same.

Sorry, Sprintlink folks, these are the facts. Yes, you get transit to the CIX — over what? A T1? C'mon. Get real. Eighty-eight T1s attached to Sprintlink and you want to cram all that water down this little itty bitty garden hose? Give me a break; you need a 16" main for this traffic, and the main just isn't there. Ask the board why they never went to reasonable backplane interconnections. Ask the board why they won't allow anything other than a T1 connection. Ask the board why it took the NAPs to wake their butts up long enough to do SMDS, which is a botch anyway — why not just let people come in via T3s or whatever and build the thing big enough to handle the traffic? Why get PacBell all excited with this SMDS thing?

CIX has always been about policy, not routing. Again, facts is facts. CIX ought to be about policy all right — PUBLIC POLICY. Not just the self-declared "no settlement" policies of the members, but policy on the hill, policy in the press, policy in the public eye. You can't get there from here as long as every little ISP is screaming for an anti-trust investigation, and soon they will be joined by every damn BBS in this country as well.

Try to ignore them. You can't. Jack Rickard is already on the case. Read his scathing editorial in Boardwatch. It's ugly. It is also right on target . He has the power of the printing press, because he owns one. And he, and the tens of thousands of BBS systems around the country, which are, one by one, coming to ISPs like MCSNet and asking to be connected.

Screw the old boys club — either play fair, or get the hell out. Open all the books to public inspection. Open all the board meeting minutes to PUBLIC inspection. Hell, put both on the Web! Broadcast this upcoming meeting on the Mbone in real time. We've had offers to do so - the equipment certainly will be in Atlanta. Rick is alleged to be intending to record the meeting — OK, I suggest that all members bring their own recorders, out in the open where they can be seen. Give copies to the press. By stating intent to record Rick has given license to everyone else to do so as well; this is no longer a private meeting where no record will be kept. Use the power you were granted.

Folks, we, as members, own the CIX. It is not the other way around. Don't let the spin doctors tell you otherwise. You paid for a ticket to the circus, now come on in and enjoy yourself. Make sure your voice is heard. You must ask the tough questions. Silence is consent to what is going on here. Consent is something you need to carefully consider before granting it. Failure to act when you know about things which are wrong can be identical to doing those same things yourself.

I have been asked for my input on the policy issues, including the fee structure. I sent Bill Washburn both my ideas on the routing restrictions and at the same time a tiered access proposal that would ensure that everyone could play in the treehouse, large or small. I said that in my mind these issues are tied together; you must fix both problems at once. The board did what it was going to do anyway with the routing restriction, but ignored the tiered membership issue. [Editor's Note: Reliable sources tell us that Washburn was told if he ever again suggested a change in the fee structure to the Board, he'd be fired.]

The board also ignored the flame fest that routing announcement ignited, which in my opinion is gross dereliction of duty. There's some information you didn't have before.

That got me irritated. I figured I'd wait and raise the issue at the meeting — plenty of time to fix the problem there. Yes, we have an open and honest board, I thought. They're mistaken, not interested in things that smell an awful lot like the back end of a horse. Naw, there's no way that a trade association, 501(c)6 at that, would pull this kind of garbage, is there? I'll put some items on the agenda for the meeting, and we'll all get a copy long before the meeting begins so we can sleep on the issues before being asked to debate and vote.

Hell, I think I'll run for a board seat — this has to be a misunderstanding, thinks I. Boy, was I wrong.

The Japanese thing shows up, and the SMDS cloud, available only in California. I started to read the bylaws. I found that unless I am reading-comprehension challenged, there aren't two seats up for re-election — ALL OF THEM ARE. Read the thing... I'll have copies in Atlanta, as will Joe. Have the bylaws been changed in secret? Add to that those five pesky little things the CIX is supposed to do for the industry and the membership, none of which are, in my opinion, being accomplished. Then top the cake off with icing — the fact that, in some folks' opinion, the association is trying to compete with their own membership outside the US?!

I say stop the madness now. The CIX as a policy and ideal isn't dead. If this organization can't be fixed in Atlanta, another one will form instantly that does solve these problems. Now there's a promise — from this little mouse in Chicago. [End Denninger's statement.]

MONDAY SEPTEMBER 12, 1994 POSITIONS HARDEN

Denninger threw down the gauntlet. A take over of the CIX by the reformers, or walk out, invite the Department of Justice in, and found the MCIX (MidWestern Commercial Internet Exchange) immediately. Denninger also reported to us that he had decided that the CIX router should be shut down because the only way that the playing field could be truly level for CIX members was for there to be multiple CIX interconnect points where routing tables would be freely exchanged with all networks who connected there. And yes he would be opening such an interconnect point at his Chicago NAP immediately after the meeting, as a CIX

interchange if the take over succeeded and as a MCIX interchange if it did not. The CIX agreements for no settlements and open peering among all members would be maintained as conditions for membership. Without a single router to run, no CIX member would have the opportunity to have technical control over something that could be used to the detriment of other CIX members. Moreover, no group of West Coast members would be near a single interconnect point and have an economic advantage over other members in the Midwest or Eastern US, not to mention other parts of the world.

Sprint's position meanwhile was that it was committed to staying with the CIX as long as the CIX appeared to be a viable entity. Sprint decided almost a year ago that it could not afford to leave the CIX because if it did it would be accused of acting as a big bad IXC out to destroy the smaller provider's operation for its own selfish interests and so it could impose measured usage pricing. Sprint of course would reconsider if the CIX came under serious legal attack.

NEARNET - BBN'S ROLE

John Rugo, the NEARnet CIX board member managed to steer clear of most of the controversy. However, for several days we had been hearing that NEARnet's ambitions by no means ended with the purchase of BARRnet. Specifically that NEARnet was negotiating to manage the NOCs of most of the Regional networks. And secondly that NEARnet signed an agreement with MCInet to tunnel traffic through its backbone and hence be able to drop T1 lines off to new customers in more than a dozen of the largest cities in the US.

We asked a source at NEARnet if these were accurate statements. The source replied that he would neither confirm them or deny them.

SEPTEMBER 14 - 2 AM

Multiple phone calls with various parties indicate that insufficient time for the poltical campaign prevented a concerted effort as planned. The button and hospitality suite ideas went up in smoke. Four days before the meeting began the insurgents could only place 50th on the waiting list at the Omni for a suite.

At the official CIX Mixer people estimated 35 attendees representing between 15 and 20 CIX members.

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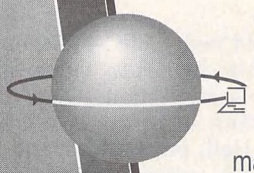

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FROM INTEGRATED SOLUTIONS

Members have flown in from Hong Kong, Singapore, Japan, Europe and Korea. But there are a lot of new American members - smaller service providers who are still trying to get acclimatized to the new political situation. These folk are having a hard time sorting substance out of the accusations. Many of them appear to have been reluctant to budget $1500 for the expenses of coming to participate in a meeting that they feel unlikely to be able to influence. Worries are expressed that Rick Adams may be able to claim a quorum of members is not present and cancel the meeting. Opinions are ventured that if he does he'll have a riot on his hands.

What are the chances for a new counter CIX, an MCIX? They seem to be declining. Many members are outraged but probably not a majority of the 80 odd current members. It is anticipated that Washburn will be fired either before the meeting or at the meeting. Assertions are being made that several of the new members' membership checks may not have cleared their bank accounts yet. ANS is reported to be sending an attorney as it's representative to the meeting. It is thought however that a major exodus of members may not occur unless the CIX becomes the target of legal action. All too few people seem to be really aware of what's going on. We have had complaints from new members who wait weeks before they even get attached to the CIX members' list. Jack Rickard is there and was quoted as saying at the reception that someone should "either fix it or put a bullet in the poor pony's ear" - and by the pony he means the CIX.

Net99 and some related venture will go ahead and act like the CIX without calling themselves the CIX. They believe that they will be able to sell bandwidth in Asia and Europe in a way that is wide open to resale and in a way that PSI and UUNet who are doing business in those parts of the world are not now doing.

SEPTEMBER 14 - NOON - CIX IS IRRELEVANT

Joe Stroup: Karl Denninger and I feel that the the CIX is irrelevant. NET99 has its backbone. We are done. We are real. Starting at the CIX meeting in two hours we are taking orders for service. We have signed agreements for a ten mega bit per second backbone. Are we doing business with MFS? Yes. Are they our entire game? The answer is no. How we put this together doesn't really matter. All that really matters is can we give you transport from point a to point b if that's what you want and then we will deliver on our promise.

Because of the discussion we have had with various carriers earlier today, the CIX is now in a position where it doesn't matter. If the CIX were the only game in town small ISPs could be blocked November 1 if they were not members. With us in at MAE East and Karl opening a Chicago interconnect point, small ISPs no longer need to join the CIX in order to get settlement free interconnect with the rest of the network. Sooner or later, this in and of itself, will stunt CIX growth.

COOK Report: In other words, so many people are interested in selling all the transport they can get without worrying about any settlements through as many open interconnect points as possible that the issues that originally brought the CIX together are no longer operative.

Stroup: We are interested in doing business - not in political fights. A T1 is $1995 a month with complete rights to resale. We'll sell you a T3 if that's what you need. If you need a Private Virtual network, fine - come to us. We'll be glad to take your order and do whatever it takes to get the job done. You get on our network via the nearest POP. Our network traffic exchanges with the other nets of the Internet perhaps at MAE-EAST and perhaps in Chicago and other public interchange points.

COOK Report: So at the meeting this afternoon are you still determined to clean house? And what will you do if you don't succeed?

Stroup: I am no longer running for a Board seat. Karl is. If our entire reform platform is adopted and an entire new board elected, we'll stay. If not we will resign. We'll call you later Gordon.

A few minutes later another call comes through saying that Bill Washburn has accepted a job with an organization other than the CIX and that an announcement will occur soon. We are aware of what job he has accepted but sworn to secrecy.

SEPTEMBER 14 - 11 PM THE SORRY CONCLUSION

A challenge to Rick Adams' rule of the CIX by Joe Stroup and Karl Denninger's Reform Platform lost today. As Marty, Glenn, and Bob reported to com-priv, Rick was re-elected (it seems in part on a platform to place CIX routers in Europe and Asia). Glen Kowack, as the new Board member from EUnet, was presumably aligned with that effort and gaining a seat on the Board. In a sudden show of openness Marty, Glenn and Bob announced the election results to com-priv and promised to try to get a more detailed report out "next week."

What they did NOT say is that speculation is running very high that Bill Washburn is resigning as executive director of the CIX. Chris Locke told us tonight that he was having very high level discussions with Washburn and that these are expected to lead quickly to a very high level position for him at MecklerWeb.

Even more significant is that a motion to table the imposition of routing filters on November 1 narrowly carried. It is the belief of the people we talked to that only a vote by the entire membership of the CIX would allow the filters to be imposed at this point.

What has emerged is a new organization Net99....signed sealed and delivered in agreements with major carriers early today. Net99 is now taking orders for national backbone services predicated on unlimited rights to resell and has peering agreements at MAE East. These agreements mean that it will be able to deliver connectivity to the Internet that cannot be obstructed by the imposition of CIX filters at the California choke point. The defacto operational principals of Net99 will be what the CIX started out with. Peering with all comers and no settlements. Inquiries to **nettech@crl.com.**

What is left is an organization that calls itself the Commercial Internet Exchange, but that as some of its own members pointed out has done virtually nothing to fulfill its five aims promised in the members' agreement. Also an organization that has some nasty allegations of anti-competitive action hanging over its head and a demonstrated record of tight rule by the board and poor channels of communications with its members. The threat of routing filters brought in

about 20 new members. However it also exposed some festering sores. Now that this round of the battle is over, it is no longer necessary to pay CIX dues to get commercial routing to the world wide Internet. Sprint has announced its own bilateral agreements to protect its reseller customers. Net99 is there as an alternative and the CIX membership itself today, temporarily at least, pulled the teeth from the CIX router. Under these conditions we predict that the CIX's recent membership increase will fall off dramatically.

The CIX had the cachet to be the trade association that the Internet needed. We believe that in light of the just concluded Interop soap opera and with its executive director likely to soon depart, the board is unlikely to catch "religion" and try to move the CIX seriously in that direction.

We also believe that, while there are enough unanswered questions about the integrity to the CIX process, any effort at serious reform is unlikely given that the same board (80% at least) is still in control. Many to whom we have spoken find it very strange that the by-laws of the CIX do not seem to prevent the organization from paying board member's companies to carry out the duties that the board decides on. They find that this represents a blatant conflict of interest. It is hard to imagine why a knowledgeable ISP would join such an organization at this point. ◆

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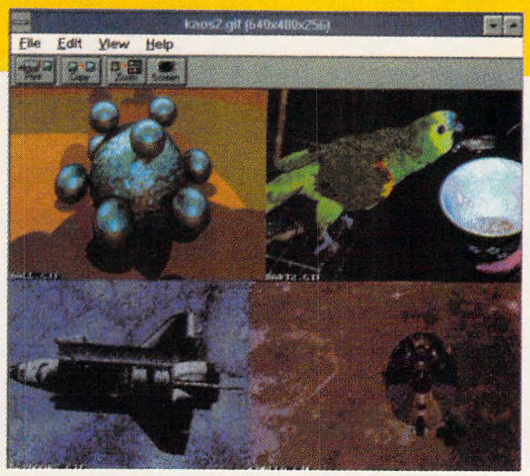

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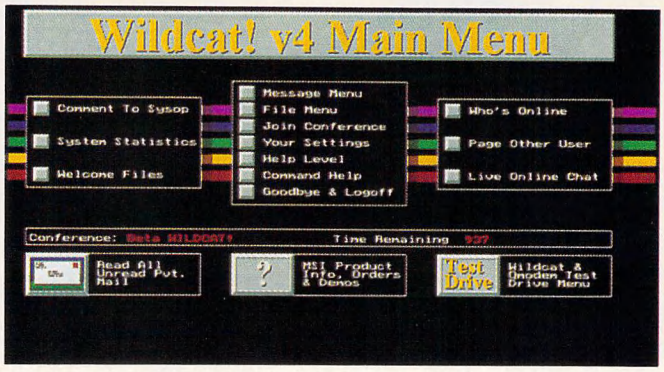

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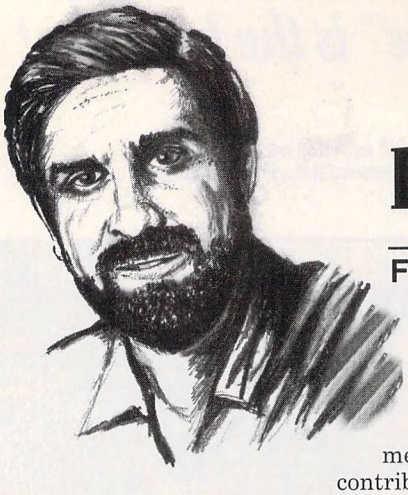

net.imperative

by Harley Hahn and Wendy Murdock

FINGERING THE WORLD

There is an old saying in show business, "Everyone wants to get into the act." On the Net, getting into the act means creating your own personal contribution to global culture and there are lots of ways to do it.

Harley Hahn is an internationally recognized author, consultant and analyst. His books include: The Internet Complete Reference, The Internet Yellow Pages, Unix Unbound, and A Student's Guide to Unix.

Wendy Murdock is an artist, writer, and Internet veteran specializing in creative art forms including BBSs and MUDs.

Some methods require a fair bit of expertise. For example, you can set up some type of a server of your own: a gopher server, a web server or an ftp server. Such efforts can be gratifying (in a nerd-like way), but they can also be frustrating and time-consuming to the max.

A simpler method is to find someone who has already set up a server and use it to offer your own wares. The most trendy thing these days is to create your own home page for the web, but there are other ways to use an existing server. For example, some Internet providers make it easy for users to take over a chunk of the public anonymous ftp area and create their own repositories of whatever they want. You will also see areas of gopherspace that someone has managed to snaffle in order to create a personal gopher server.

However, the most widespread method by which people make information available to the general public over the Net is also the oldest method: the finger services.

Finger was originally (and is still mostly) a Unix-based service. The original Unix came from Bell Labs but much of modern Unix was developed at the University of California at Berkeley. It was in Berkeley that someone got the idea that — since so many people were starting to use the Unix system — there should be a means by which people could leave public messages for anyone who wished to read them. To display such information you enter the **finger** command, followed by the person's address. On the Internet, you need to use the full address, for example:

finger president@whitehouse.gov

When you enter such a command, we say that you are "fingering" that person (or, more precisely, that particular userid).

Now, U.C. Berkeley is a university and the idea behind the original finger service was to display information that was useful within an academic environment. Interestingly enough, the basic ideas behind the finger service have not changed in years. When you finger someone, the usual type of information that you see is what would have been appropriate within the U.C. Berkeley Computer Science department 20 years ago. In most cases, you will see the person's userid (user name) as well as their full name. You may also see a phone number, an office number, the name of their home directory, and the name of the shell (command processor) that they use. Most finger services also tell you how long the person has been logged in (or the last time they logged in), as well as the last time that they read their mail.

This is basic information that is generated automatically each time a person is fingered. However, the designers of finger recognized that there is a need for people to be able to supply their own information to the public at large. In those days, the public at large meant professors, grad students, and perhaps a small collection of undergrads and administrative workers. Most of these people were computer science researchers. Thus, finger was designed to allow you to specify two other types of information.

First, you could show people a brief description of the project you were working on. (In that environment, everyone was working on some project or another.) Second, you could tell people what your immediate plans were. For example, you might announce your office hours and which days you expected to be away at a conference.

To implement these facilities, finger was designed to look for two special files in your home directory (remember, this all runs under Unix). The first file was named **.project** (yes, the "." character is part of the name). The second file was named **.plan**. The intention was that the **.project** file would contain a short, one-line description of your research interests. The **.plan** file could be as long as you wanted, and contained whatever information you wanted to put in: usually a schedule of some type, or something relating to research or classes. (By the way, the names of these files are pronounced "dot-project" and "dot-plan.")

To this day, the finger service in many places still runs much like we have described it. There are variations, but what hasn't changed is that, if you are working on a Unix system, you can create **.project** and **.plan** files that anyone with access to your machine can see.

In those early days at Berkeley, no one anticipated that such a thing as the Internet would ever happen and, when it did, literally millions of people around the world found that they could read the **.project** and **.plan** files of everyone else.

If you have Net access on a Unix machine, all you need to do to broadcast your thoughts to the world, is create a **.project** file in your home directory. To do so, you must be able to use some type of editor, such as **vi** or **emacs**. If you are not a Unix nerd and you don't know how to use such an editor, you have three choices.

First, you can use the **pico** editor (which is easy to use and which is part of the **pine** mail system). If this editor is on your system, you can create a **.plan** file by using the command:

pico.plan

Second, you can create the contents of the **.plan** file on another computer (such as a PC or a Mac) and then send it to the Unix computer.

Third, you can get someone who knows Unix to help you.

To finger someone, anywhere on the Net, all you need to do is use the **finger** command, like we did above, followed by that person's address. In most cases, this will be the address to which you would send them e-mail.

In a moment, we will show you some examples of interesting things that you can get at by fingering someone. You will see that some of the **.project** files contain a lot of information. If you finger such an address, most of the information may scroll off the screen before you have a chance to read it. On a Unix system, a good solution is to send the output of the **finger** command to a pager program (such as **more**) that will display the information one screenful at a time. For example:

finger president@whitehouse.gov more

If you are using a system with a graphical user interface (such as a Mac, Microsoft Windows, or X Window), you can use the scroll bar to move up and down and read what has already disappeared from the screen.

So, what can you see by fingering people? Just about anything that you can imagine. The address we used in our previous examples, **president@whitehouse.gov** is a real address, supposedly that of the President of the United States. You can, in fact, even send e-mail to the address which is, of course, ignored. When you try to finger the address, you see the following:

Finger service for arbitrary addresses on whitehouse.gov is not supported. If you wish to send electronic mail, valid addresses are "PRESIDENT@WHITEHOUSE.GOV", and "VICE-PRESIDENT@WHITEHOUSE.GOV".

In other words, the sort of computer-illiterate foolishness you expect to see from the government. So, let's leave them alone and turn to more interesting addresses. One of the most interesting is:

finger trisha@ramp.com

This command will display information about an organization named "Brandy's Babes," which describes itself as the "world's first cyber brothel." We won't go into the details (you will have to finger them for yourself). Let's just say that if you are in east-central Phoenix, and you have **$150** to spend for an hour's fun, you can check it out personally.

Another interesting address to finger is one offered by a fellow named Craig Copi. The command is:

finger copi@oddjob.uchicago.edu

Craig offers a variety of interesting items. After a few short quotations, he shows you timely information in a number of different formats. Here is an example:

Sunday
September 18, 1994
3:39:54 PM (CDT)
Greenwich Mean Time: 8:39:54 PM
Day 261 and Week 38 of current year
22,520,394 seconds elapsed in current year
98 shopping days until Christmas
Day 13 of Tishrei, 5755
Year 17 of Machzor 302
71 shopping days until Chanukah
For Chicago (CDT)
Sun rise: 6:34 AM, set: 6:56 PM (today)
Sun rise: 6:35 AM, set: 6:54 PM (tomorrow)
Phase of moon: full
Age of moon: 13 days (past last new moon)
The year of the Dog

Following this is a list of special events that have happened on the current day. For example, September 18 was the day that Jimi Hendrix died (24 years ago), and was also the day that the cornerstone of the U.S. Capitol in Washington D.C. was laid (201 years ago). (We won't even try to explain our theory linking these two events.)

The list of events is followed by a summary of current NFL Football scores and two ways to get more football info: a web site and another address to finger. If you would like baseball information, you can access information (provided by Joseph Hernandez) by using the command:

finger jtchern@ocf.berkeley.edu

One of the common uses of finger information is to point people to other resources. In the previous example, we were given the name of a web site as well as another finger address. It is common to find people who will use their finger information to show others where to find some resource or another. For example, perhaps the most well-known list of Internet resources is the Internet Services List maintained by Scott Yanoff. If you want information as to how to get this list, you can finger Scott at:

finger yanoff@csd4.csd.uwm.edu

To continue. The next address we will finger belongs to someone named Laszlo C. Tinker. The command is:

finger laszlo@alpha1.csd.uwm.edu

This command will display a lengthy summary of "luxury" tobacco products along with their ratings. Mr. Tinker (if indeed that is his real name), demonstrates a strong man's affection for his hobby. Whether or not you smoke, you may want to finger this address simply to see how much trouble Mr. Tinker has gone to as a public service. It is certainly a lot faster than having to take the time to look up the word "fanatic" in the dictionary.

However, fanatics come in all shapes and sizes and the Internet certainly has its share. For example, there are a large number of people who are interested in amateur radio. For such people, there is a weekly publication named "SpaceNews" that is available from several sources, one of which is by fingering the account of John Magliacane. The command is:

finger magliaco@pilot.njin.net

Here is a typical excerpt from a current issue of "SpaceNews."

The ground station equipment used to make the contact included a Yaesu FT-736R with Mirage 150 W amp into a KLM-14CX antenna with Landwher preamp mounted on the antenna.
A backup configuration consisted of a Motorola SPECTRA, 110 W out to a 5/8 wave vertical antenna at 30 feet.

Right. In a less esoteric vein, Cyndi Williams provides a regular trivia quiz that you can retrieve by fingering:

finger cyndiw@magnus1.com

Here is a sample question from a recent quiz:

What actress appeared on more magazine covers in 1989 than any other person recorded in history, as she rose from the obscurity of stand-up to become the star of a sitcom?

If you want to send Cyndi your answers, she will put your name in the next batch if you are lucky enough to come up with the right answers. (By the way, the answer to the previous question is "Roseanne what's-her-name.")

The next type of finger resource we want to mention is the "coke server." In the mid-1970s, there was a Coke machine in the main terminal room within the Computer Science Department at Carnegie-Mellon University. The department had recently expanded and this had the effect of placing some of the programmers' offices on a different floor from the machine. This caused a problem: A thirsty programmer might walk all the way to the machine only to find that it was empty or, almost as bad, to find that all the bottles in the machine had been inserted only a short time earlier and were still warm.

To solve this problem, a few enterprising programmers installed switches in the Coke machine to sense how many bottles were available and to keep track of how long each bottle had been cooling. A special finger server was set up and when you fingered a particular userid (which was **coke**), the output would be a display of the status of the contents of the machine.

This particular system was discontinued in the early 1980s, but in recent years, other such systems (including another one at CMU) were created and connected to the Internet. This means that, from anywhere in the world, you can check on the status of bottles of soda in particular machines. Moreover, other people started putting other types of machines and sensors on the Net. Today, there are a number of such resources. Although we refer to them using the generic term "coke servers," they are not all soda machines. (As we will see in a moment, one enterprising fellow has connected his hot tub to the Internet.)
If you want to connect to the descendent of the original CMU coke server, use the command:

finger coke@cs.cmu.edu

This finger server reports, not only on the status of the Coke machine, but the M&M machine as well. Here is some typical output. As you can see, the Coke machine is completely empty (although there are a lot of M&Ms remaining), a condition that you might expect to find on a Sunday night:

```
Sun Sep 18 23:15:44 1994
M&M validity: 9       Coke validity: 9
Exact change required for coke machine.
M & M                 Buttons
/——\   C: .....
|    |   C: .....  D: .....
|*   |   C: .....  D: .....
|*****|  C: .....  D: .....
|*****|  C: .....
\——/    S: .....
   | Key:
   |  0=warm; 9=90% cold; C=cold; .=empty
   | Leftmost soda/pop will be dispensed next
—^—
```

At Columbia University, there are two coke servers that you can access, one for a Coke machine, the other for a Pepsi machine:

finger pepsi@columbia.edu
finger cocacola@columbia.edu

There are a number of such machines in the Net and we won't mention them all because, if truth be told, fingering soda machines gets boring after a while. However, there is one coke server that does bear some attention, if only because it breaks new ground.

Paul Hass, a Unix consultant in Ypsilanti, Michigan, has connected sensors in his hot tub to a finger server that is on the Net. This means that, 24 hours a day, from anywhere in the world, you can find out important statistics about Paul's hot tub. Here is a typical report:

Paul's hottub is nice and warm at about 102 degrees Fahrenheit. It is nice outside at about 62 degrees Fahrenheit. The ozone generator is not on. The cover is closed. The backup battery is Ok at 10.3 volts (this will still work down to 6 volts)

As you can see, the one thing that is missing is information as to whether or not Paul and his wife Lizzy are currently in the tub. However, if you finger the tub often enough, you may be able to figure out when people are in it by looking for small but significant changes in temperature.

The last category of finger resources that we would like to mention are those that really are useful. Many organizations use the finger service to make information available to the general public. For example, NASA makes an online publication available that you can read by fingering:

finger nasanews@space.mit.edu

This publication will describe all the latest NASA news, for example, what the space shuttle astronauts are up to.

Another information resource is provided by the University Computing Service at the University of Sydney, Australia. To get information as to how to access this service, use:

finger help@dir.su.oz.au

You will find that there are a number of databases that you can access by issuing the appropriate finger commands. Some of these are important mostly to people who live in Australia, while others are of more general interest.

There are lots and lots of finger resources on the Net and we could only mention a few of them. If you want to find more, there are several ways to do so. First, some Internet books contain listings of such resources. For example, "The Internet Yellow Pages," which Harley wrote with Rick Stout, has a number of such entries. (And the new edition, due out in the fall of 1994, will have even more.) You will also find a discussion of fingering in general, along with some interesting examples, in Chapter 8 of "The Internet Complete Reference," also by the same authors.

Second, if you participate in Usenet discussion groups, you will see many mentions of finger addresses, both in articles and within people's signatures.

Finally, Scott Yanoff offers a finger information program that you can download for free. The program displays an easy to use menu that, once you make a selection, automatically connects to the finger information service that you choose. The program requires an Internet connection and runs as a Bourne shell script. You can download the program via anonymous ftp. Connect to **ftp csd4.csd.uwm.edu** and change to the **/pub** directory. The name of the file you want is **fingerinfo**. It is a plain ASCII file, and even if you don't want to run the program, download it anyway, as it contains a large number

of interesting places to finger which you can extract by reading the file.

You can also find such places within Yanoff's Internet Services list. This list is widely available in a variety of ways. One easy way to get it is via anonymous ftp. Connect to **ftp.csd.uwm.edu** and change to the **/pub** directory. The list is in a file named **inet.services.txt**.

And, don't forget that anyone who can create a **.plan** file can offer their own finger resource. All you need to do is edit the file to contain whatever information you want, and then let people know where to finger you. To do so, you can post a message to the appropriate Usenet newsgroup (if you are not sure which newsgroup to use, try **alt.internet.services**). You can also put a short announcement in your signature so that every time someone reads a mail message from you or a Usenet article that you posted, they will see a short advertisement for your own personal finger resource.

Remember, on the Net, anyone can do anything and using the finger service and a personalized **.plan** file is the easiest way to become an information supplier to the world at large. ◆

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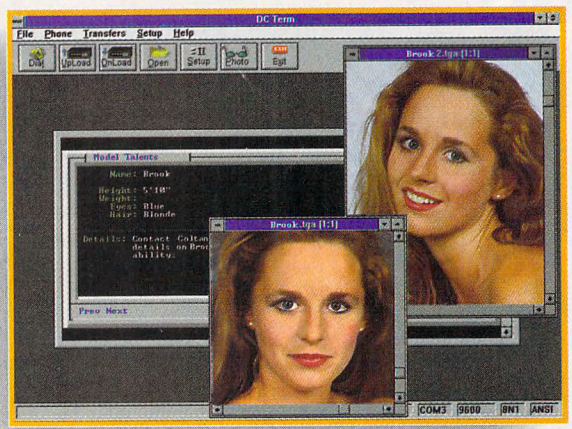

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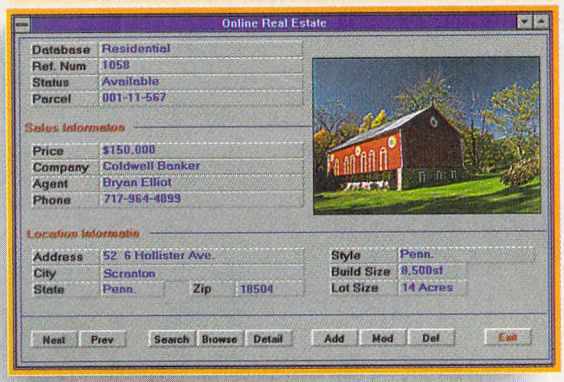

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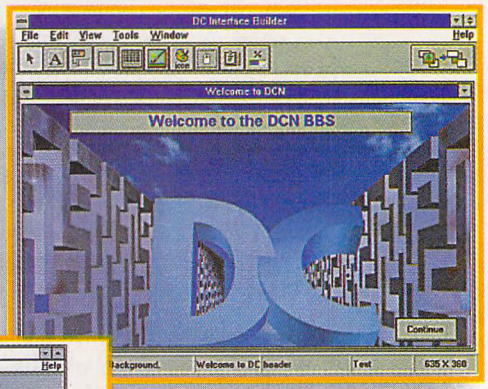

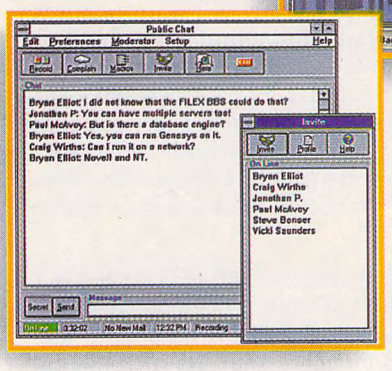

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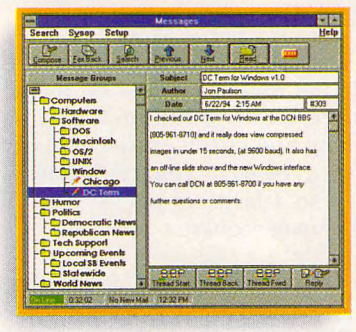

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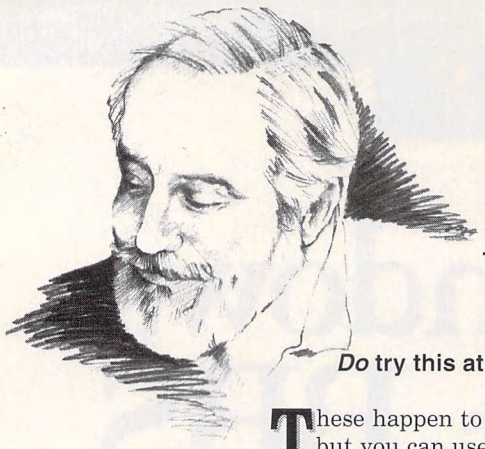

ACCESS TO GOVERNMENT

by Jim Warren

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EXAMPLES OF NET-BASED LEGISLATIVE ACTION

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Example 1: When California's AB 1624, mandating free public access to public legislative information via the nets, was introduced by freshman legislator Debra Bowen (D-Torrance), it was almost-immediately declared D.O.A. — dead on arrival.

(1) Bowen was a lowly newcomer. **(2)** In her first two weeks, she had managed to infuriate two of the most powerful people in the State Assembly. **(3)** The Legislative Data Center (LDC) that was raking in half a mil per year peddling computerized legislative data said it would cost many millions to implement. **(4)** Bowen could find only a very few supporters for the bill.

I heard about the bill, naively wrote a column supporting it and faxed a pre-publication draft to her with hand-scribbled applause. Her staffer who was honchaing the bill, Mary Winkley (**winkleme@assembly .ca.gov**), called an hour later, saying the bill was dead and explaining some of the above reasons.

Re the cost issue, I suggested that the LDC discover the Internet and use a desktop computer — instead of their proposed solution: buy a new mainframe and set up their own statewide network. (I later provided a 14-page generic implementation plan, which — to a large extent — they followed. Copy available upon request.)

Re the lack of supporters, I said there were multitudes, and asked what evidence she needed? Mary said, *"Oh, ten or fifteen faxes or letters would be a* ***strong*** *showing of support!"*

I gasped, "Out of 31-million Californians?!," to which she replied very seriously, "Oh yes." I went online that night; it took only a few days for her to have her 10-15 letters and faxes — and the dead rose.

With her giving me timely information from the inside, and Bowen working the legislators, I broadcast in excess of thirty updates and action-alerts across the net as AB 1624 began turtling through the legislative process's committee quagmire.

As a committee hearing approached, we would get the phone and fax numbers for its 3-to-17 members — a tiny, tidy target group! — try to ascertain their positions, and then flood them with faxes, calls and letters in the week before they were to vote on the bill. Basically, they didn't know what hit 'em.

Crucial note: Legislators typically assume that a single individualized fax or letter represents the views of *10- to 25-thousand voters!*

The upshot was that net-based, net-coordinated citizen action pushed this obscure, initially-moribund, special-interest (*citizen*-interest!) legislation through four committee votes and three floor votes without a single opposing vote — making California the first state in the nation to offer its extensive computerized legislative public records via the Internet, especially without any state fees.

Example 2: This year, California Assembly Member Tom Bates (D- Berkeley) introduced AB 2451 that would have essentially done for executive-branch computerized state public records, what Bowen's AB 1624 did in 1993 for legislative-branch computerized public records.

However, when Bates' aide responsible for the bill, Rachel Richman (**richmarb@assembly .ca .gov**), called to discuss it, we agreed that this was a *much* bigger project than was the legislative information — dozens of agencies; many thousands of incompatible files.

Through vigorous efforts by Bates, who is a senior legislator, and Richman, the bill moved smoothly through its first several committees and first floor vote in the Assembly. But it ran into barricades in the state Senate:

First, they turned it into a study bill — to research how best to accomplish this admittedly-complex task. That was tolerable, although "study" is often the precursor to a quiet death for controversial legislation. (In this case, the "controversy" was that some agencies didn't want to do it; others couldn't afford it; and, others were peddling the public's data for big bucks and didn't want to make it available for free.)

Then the last Senate committee inflicted what I felt was a mortal wound on the bill. They amended in a single sentence that exempted all data that was currently being sold for more than its incremental cost of copying from even being studied — much less being made available for free.

Warren [345 Swett Rd., Woodside CA 94062; **(415)851-7075**; **jwarren@well .com**] received the first-year Electronic Frontier Foundation Pioneer Award, and more recently the James Madison Freedom-of-Information Award from the Society of Professional Journalists - Northern California for helping to make government information freely available online. He is now pushing for similar access to campaign-finance disclosures. He founded ***InfoWorld*** and the Computers, Freedom & Privacy conferences, was founding host of PBS' television's "Computer Chronicles" and founding Editor of ***Dr. Dobb's Journal***, among other things.

I was diddling with other devious deeds and didn't see the killer amendment until a Monday afternoon, that was only one or two days before a final floor vote on the bill back in the Assembly.

I hit the roof! First, I got a faxed copy of the most current version that included the amendment that had slipped in more than a week earlier, and verified that its language was as onerous as I feared.

Next, I knew that immediate action was essential if we were to keep this outrageous precedent from being passed into law.

By then it was Monday evening, with the floor vote expected Tuesday or Wednesday, at the latest. If it passed, the Governor would probably sign it. (The word was that the Governor wanted agencies to profit from selling *all* computerized public state records — to those who could afford them.)

About 2 a.m. on Tuesday morning I fired off an emergency message all across the nets, captioned ever-so-politely, "Emergency Alert! Kill This @#$% Bill Now! California's AB 2451 High-Jacked By Bureaucratic Bandits!," with an inflammatory explanation of what had happened to the bill that I had strongly supported, earlier.

The net's fast, but it ain't that fast. Fortunately, the bill wasn't heard that day.

Wednesday morning I found that Bates had put it on the day's consent agenda, and one open-government lobbyist told me it was going to be passed. (A consent agenda has numerous bills that are passed as a bloc, without discussion.)

By Wednesday afternoon there was apparently so much citizen opposition flowing into Bates' office that he pulled the bill from the consent agenda and let it die without even being discussed!

That, folks, is the power of the net!

(And it helped tremendously that Bates was an honorable legislator and has a strong record of supporting open government. All he needed was some *highly* time-sensitive feedback from the public. He got it! And he honored it.)

Now we can come back next year, with better legislation, addressing the legitimate concerns that were raised during AB 2451 hearings. And each passing month allows the development of more and more net-based pressure, building to *deliver politically-irresistable citizen force!*

Federal Examples: Exactly the same process works at any level.

The Taxpayer Assets Project's Jamie Love (**love@essential.org**) used the same process last year to crack open free public access to Securities Exchange Commission records that had been functionally monopolized by Mead Data Central. And he's using it this year to force a turgid Department of Justice to stand up on its hind legs and oppose West Publishing's functional monopoly of crucial aspects of computerized federal case-law.

The Congressional Accountability Project's Gary Ruskin (**gary@essential.org**) is doing the same to effectively advocate legislation that will force greater accountability on federal legislators.

There are lots more examples — reported in past and future editions of this column.

But don't just watch and applaud. *Get involved!*

You, as an individual, *can* have amazing personal political power.

POLITICAL POWER

Note: Prior to becoming a programmer in the late '60s, I earned(?) undergraduate and graduate degrees in mathematics and taught it for ten years, including chairing a college Mathematics Department for several years.

I continue to have the predilection for first running experiments; then, from them, inducing principles; and from the principles, deducing and justifying conclusions. It's an academic's affliction.

However, I have apparently forgotten enough of legitimate logic to permit me to inflict the following pseudo-mathematical structure upon you, dear reader. These principles reflect the preceding "existence proofs" of their application, this year and last.

Note: An "axiom" is a fundamental assumption; a statement that is accepted as true without proof. Or: It helps to know where we are starting, if we are to figure out where we're going and how to get there.

These are some axioms at the foundation of my continuing belief (delusion?) that we, the People, *can* retake control of our local, state and national communities; make things better; right wrongs; smite the wicked; reward responsibility — and generally fix the world. Eventually. (And even if we can't, what more exciting way is there to utilize our time and talent?)

"PRINCIPLES OF *MODERN* POLITICAL ACTION"

AXIOM OF SOVEREIGNTY: Sovereignty rests with the People.

"Sovereignty" is final authority or ultimate power. There are various political theories about it.

One says that the government is sovereign. *Nay!*, sez I — sovereign power is merely temporarily vested in the government by the governed, until the People get fed up with the manner in which their government abuses that power-on-loan.

Another theory, the Great Man theory (as they used to call it in less politically-correct days), says that leaders are sovereign; that functionally, citizens are merely a herd to be shepherded by the sovereign leader(s) — who are invariably self appointed. And somehow, such shepherds seem to do to the members of their flocks what shepherds have always done to their sheep.

Unfortunately, there is some evidence that the Great Man theory may be true, and said leaders would certainly prefer that we sheep accept said theory. But I choose to again say, *nay!*, — if for no better reason than that it permits us "mere" citizens to avoid responsibility for our actions — disregarding their results; ignoring our responsibility to participate in the process of our own governance, since "They" will take care of us.

(One of the nice things about axioms — we can choose any self-consistent set of `em that we wish. They are, by definition, accepted as true, without proof. And incidentally, if we are in conflict with someone about an issue, it is often worthwhile to review the fundamental assumptions from which our conflicting views derive. Thereby, we can often either resolve the difference, or "agree to disagree" — and then choose whether to haul out a .357 Magnum to decide the matter.)

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COROLLARY OF RESPONSIBILITY: Each individual must be held accountable for the results of their actions — including inaction. To the extent that we excuse or otherwise permit irresponsible behavior that results in preventable harm, the fabric of society is torn and our culture degrades.

(A "corollary" is a conclusion that trivially derives from previous conclusions.)

AXIOM OF INFORMED PARTICIPATION: Timely access to accurate and comprehensive information about the community — local, regional, national or global — and its governance is prerequisite to responsible exercise of the People's sovereignty.

AXIOM OF CITIZEN COMMUNICATIONS: The People require timely mass communications with themselves in order to exercise their sovereignty.

COROLLARY OF CITIZEN COORDINATION: Mass communications by the body-politic with its members must be *economically* available to those citizens, if citizens are to effectively act. A variation on this is the old hack that, "The power of the press belongs to those who own one." Networked desktop computers are tomorrow's citizen presses, and they are unconstrained in tone, content and volume by expense, advertisers, licenses or even national boundaries — and we better make damned-sure they stay that way.

Please note that during the American revolution, a printing press was often in a home's spare room — and one did not need to buy newsprint by the ton to have effective communication with the community. (A well-known political corollary — from the pre-networking "old days" when newspapers were the only mass-communications alternative — is, "Never argue with someone who buys newsprint by the ton.")

AXIOM OF A RESPONSIBLE BODY-POLITIC: Given timely access to adequate information, and the time in which to make reasoned decisions, the People as a body will make good decisions.

My cynical side howls that this may not be true. But, if it's not, then democracy and representative government is invalid. So I choose to perhaps-naively accept this axiom.

AXIOM OF ACTION: All it takes to make things better is time and effort. Without limit. i.e., there are no free lunches, and nobody else is going to "take care of us," except Us! The price of freedom is and always has been continuous personal involvement and personal action.

So let's get on with it! ◆

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EDUCATION LINK

by Rea Andrew Redd

HSLC NETSELECT: THE MID ATLANTIC REGIONS ON RAMP TO THE INFORMATION HIGHWAY FOR K-12 TEACHERS AND STUDENTS

I have just moved about ten to fifteen miles from the farthest reaches of the Pittsburgh Metropolitian Area. Strolling into my county library, I was curious as to how it is adapting to the information revolution. Would it be automated beyond the bar code and wand check-in/check-out system?

It certainly is. The library is served by the Health Sciences Libraries Consortium (HSLC) which supports information and resource sharing through automation and cooperation to online databases and the Internet. Basic services include online catalogs and the Internet; premium services offer MEDLINE and three other health databases plus the HSLC Union List of Serials.

Access to the HSLC online documentation is through a World Wide Web (WWW) client. Documents are available in ASCII text (.TXT), Postscript (.PS), and WordPerfect (.WP) format. ASCII files may be displayed on screen or any of the files may be copied to your directory for downloading to your system. A minor drawback is that Postscript and WordPerfect files cannot be displayed on screen.

Most recently, NetSelect menus have accelerated the speed and decreased the frustration level of users by developing a series of user selectable menus organized by broad subject "views." For example, the Education View Main Menu you can readily enter K-12 Education Resources, Higher Education Resources, Education Databases, Online News and Journals, Community Information Systems, Electronic Mail, Internet Access, Account Utilities, HSLC Information, and a Reference Desk.

We immediately jumped into the K-12 Education Resources and found it simply divided into student resources, subject resources, and teacher resources. A quick flick of a finger brought up the teacher resources and a treasure house's front door silently opened. KIDLINK (Education Link, Boardwatch, October, 1994), MountainNet, Minnesota K-1 and Starknet K-12 Gopher, the U.S. Department of Education, Education Resource Clearing House (ERIC) plus eight other databases were before me.

Without hesitation I took Florida Tech—Education (FTE) and through the home Gopher server: **vienna.hh.lib.umich.edu** found a 16 item menu. It was a difficult choice, I quickly chose Education and 18 more databases confronted me. From a menu which spanned adult education through resources for educators, I choose Education Resources on the Internet.

An 11 point menu and then an 18 point menu brought me to "How Teachers Find Projects." Total elapsed time since I began my search: less than five minutes. I found a mini-workshop posted by Beverly Hunter, BNN, on Kidsphere, COSN, and NII-Teach which focused upon the question "How do teachers find and join networked projects and virtual communities on topics they are pursuing with their students?"

Ms. Hunter received 21 answers from classroom teachers, university faculty, state and local education administrators, and from a variety of intermediaries assisting teachers in the process of locating projects to join. The responses fell into two basic categories: A) processes devised by intemediaries such as library media specialists or the Global SCHLNet Foundation, to assist teachers in locating projects suited to their needs and B) information about various listservs and newsgroups in which teachers and others advertise their projects.

In less than a half an hour of reading, I read the comments of 21 educators practicing what may be called the fluctuating state of the art of Internet education. Among them foremost is SCHLNet News Service (formerly FrEdMail) which is now enhanced to include a conferencing management service called SCHLNet that uses Usenet format newsgroups to create a mini-usenet aimed specifically at K-12 teachers and their students. The benefits of SCHLNet are that it solves the problems of "noise control" on the Internet. It moves your listserv and group mail topics out of your personal mail boxes and into the SCHLnet conference area, organized by topic, and ready for browsing when you are ready. Your mailbox will once again be used only for personal correspondence.

In starting a project, one University of Ohio professor used Kidsphere and a local newsgroup in Columbus; within three days he had 380 participants from 22 states and countries. He also finds that k/12.Euro-teach is a good way to get the word out about upcoming projects needing registrants. Another educator finds success in the Electronic Schoolhouse established by America Online, as well as Internet listservs, like Kidsphere.

Joseph Scorza, executive director of HSLC, reports that the organization's growth has been rapid; begun in 1987 and funded by the Pew Charitable Trusts foundation, HSLC now is financially independent. Within Delaware, New Jersey, Maryland, and Pennsylvania there are 550 members with more being added monthly.

Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: **redd@genesis.duq.edu**

Health Sciences Libraries Consortium receives snail mail at University City Science Center, Suite 500, 3600 Market Street, Philadelphia, PA 19104-2646; you may wish to call them at **215-222-1532**, or fax them at **215-222-0416,** or telnet to HSLC.ORG and this will allow you to peruse HSLC's shared online library catalogs of six Pennsylvania medical universities (login:SAL).

We always encourage our readers to get involved with their public library and see if you can move them on to the information highway by using the HSLC NetSelect onramp. A one time membership fee of **$150** and a **$100** yearly account fee puts HSLC NetSelect well within the range of all county libraries. From a public library with an account, per minute charges range from six cents to 15 cents per minute, though that may disappear as state governments consider subsidies to library budgets for this specific request.

If you have access to an HSLC NetSelect account then a dial option includes an 800 number at a **$9** an hour fee. Also, those who have local CompuServe dial-in nodes can use the NovaDial/NovaLink service which reduces the cost to six cents a minute or **$3.60** an hour.

MEMO FROM THE INFOBAHN RE: HOW TO RAISE $400 BILLION? "SUCK'EM IN CHEAP"

Macworld (October, 1994) conducted a national public opinion survey hoping to answer critical information superhighway questions facing industry, academica, and government: What do consumers want and what are they willing to pay?

Common assumptions focus upon video entertainment as the principle goal of emerging networks and represents the greatest consumer interest. Not so reports *Macworld.* Various education and library capabilities took seven out of the top 12 places on the list of what consumers want on the Infobahn. Obtaining movies and TV shows ranked tenth out of 26 in the level of interest category.

Interpreting the survey, it appears that consumers are much more interested in using networks for education, information access, and involvement in civic affairs such as voting and electronic town halls, rather than the assumed goal of entertainment video. By the way, have you really met anyone whose confessed goal in life is to be a better couch potato?

And now for the money angle. More than one-third of those surveyed would pay more than **$10** a month for distance learning; less than one-fifth would pay **$10** or more a month for video-on-demand. This is quite the opposite of what the information net builders have envisioned for us.

Vice President Gore has estimated the price tag to be about **$400** billion for an information highway that improves communication, education, medical care and political participation. Gore's vision offers fully switched, real-time, many-to-many communications with broadband, two-way, full-motion video communications.

Major cable and phone companies are talking about spending tens of billions of dollars on the new networks. Their financial commitments over and above routine infrastructure maintenance amount to a small fraction of this tens of billions of dollars. Great is the difference between Gore's **$400** billion ticket and the cable/phone companies' monetary outlay for the ride.

Bell Atlantic suggests that videos on demand, home shopping, interactive games, direct response advertising will generate enough income to add applications such as tele-medicine, tele-learning, and tele-computing.

Telecommunications, Inc. (TCI) thinks that lifestyle shows will appear with a single advertiser and take on the appearance of regularly programmed infomercials. Access Network Technology Research (ANTR) at Bellcore Labs hopes the addictive qualities of video games will provide the income to later add the "socially good" elements of education, medicine, and civic duties.

"You try to suck them in cheap then as they get to higher and higher [game] levels, increase the rate per minute," ANTR told Macworld.

Friends, what we need is some very creative ideas from those people who will actually use the Infobahn to do other things besides watch movie reruns. If we wait to have the "invisible hand of the market" (Adam Smith) to pay for Gore's vision and (from the Macworld's survey) our vision of the information highway, then we must wait for what will first have to come to pass.

Online gambling, and at-home betting will probably end up paying for tele-learning, telemedicine, and civic duty capabilites of the Infobahn. Can medicine and education raise their share of the **$400** billion; what will it take to give us an Information Highway we can use? Education is paid for by tuition, taxes, endowments and goverment grants. Medicine is paid for by service charges, business contributions, employee contributions, and government grants and endowments.

The estimated 100,000 new customers per month of the commercial online systems and the Internet have shown themselves to be a large and increasing market of online communication and interactive information services, a large segment of which is educational services. Certainly there needs to be a forum and national consortium of schools, colleges and universities with the commercial online systems to manipulate the markets invisible hand to pay for their share of the **$400** billion ticket to build the information highway.

E-mail me with news, plans, suggestions, and visions of the future focusing on how education and medicine can pay their freight on the information highway instead of waiting for electronic gambling to subsidize their ticket.

ALL ALONG THE (BOARD) WATCHTOWER: JUST BECAUSE YOU PAID FOR IT DOESN'T MEAN YOU OWN IT

Because taxpayers have already paid for material in the Library of Congress, shouldn't they expect to have it publicly available electronically at little or no cost? One of the three greatest libraries on the planet earth, the Library of Congress (LC), is struggling to digitize its books, manuscripts, photos, drawings and recordings so as to make them available online.

Within the next few weeks, the LC will announce the start of the conversion of its most important holdings into a digital format. A "virtual library" of digitized images that would look just like the originals could well be the goal of one of the most amazing government/foundation/private sector endeavors in the first decade of the 21st century.

Travelling over the electronic networks to high-definition television sets and computer screens across the globe, the entire collection of the LC could become accessible to mllions of teachers, scholars, and students. The New York Times reports that Suzanne Thorin, Chief of Staff of the LC sees the goal as being to bring " . . . (the LC's collection) to the people across the country, and not just to the people who can come to use the library in Washington." But

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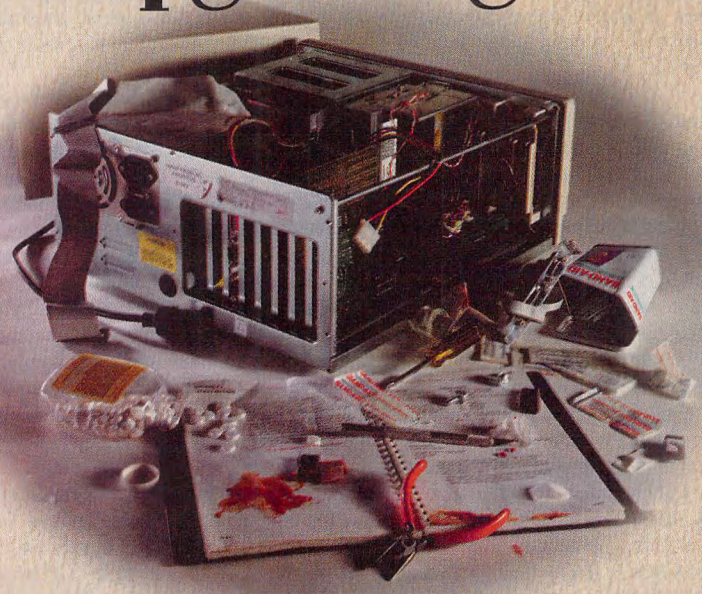

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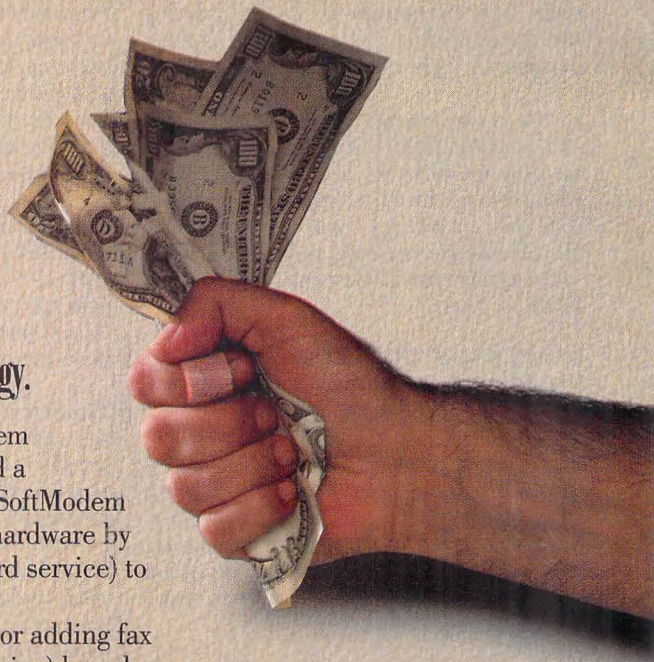

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with 104 millions items, what will they digitize first?

The obvious benefit for the LC is that the increasing storage problems with shelves and cabinets will be minimized; in digital form, dozens of books could be stored on a single disk. Struggling to preserve rapidly deteriorating documents, the LC may cease to worry. In digital form, rare manuscripts could be viewed repeatedly without deterioration and can be copied without harming the originals.

So far the actual cost of this project can only be estimated at millions of dollars; the Digital Library Coordinating Committee of the LC is seeking a mix of private gifts, industry donations and appropriations from Congress. Harvard and Cornell universities have already begun to digitize their collections and place them on electronic networks; these schools have experimented with this funding mix.

But beneath the LC's endeavor is the Walt Disney Company, Electronic Data Systems Corporation, Xerox Corporation, Bellcore Laboratories, and Bell Atlantic. Called together by Steven Jobs, one of the founders of Apple Computer Inc. and Next Computer Inc., these businessmen and the National Science Foundation met in September to coach Dr. James Billington, Chief of the LC.

Immediate worries for these administrators are the questions of copyright, computer security against hackers, viruses and system failures, the cost of access for taxpayers, privacy protection for users of the system, and the establishment of standards for the quality of the electronic images. An upcoming topic at this month's meeting is the pricing structure.

What we may soon have is the National Digital Library which will become the most extensive source of content material for the emerging National Information Infrastructure, often described by Vice President Gore as "the information superhighway." Will the U.S. Congress sell off the electronic rights to the Library of Congress?

Over a decade, could the digital rights when sold generate $400 billion, a price set by Vice President Gore to fund the information superhighway? Will you have to pay twice for the Library of Congress? ◆

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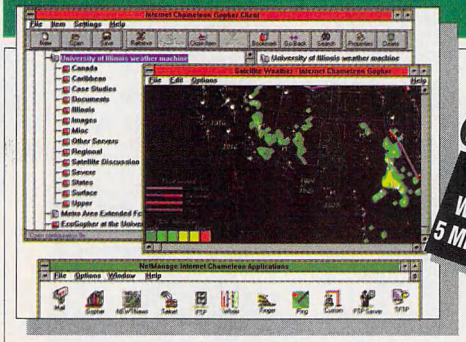

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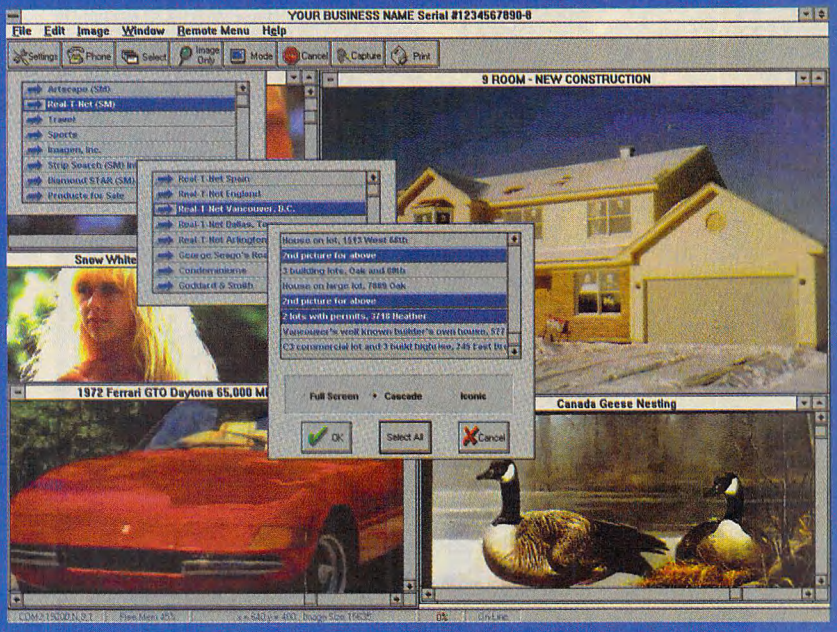

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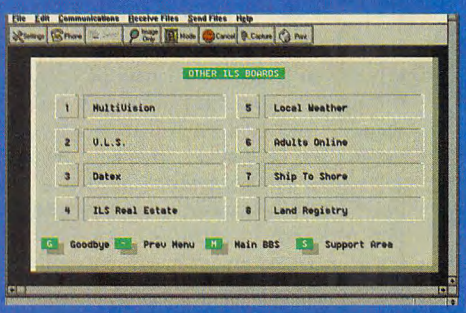

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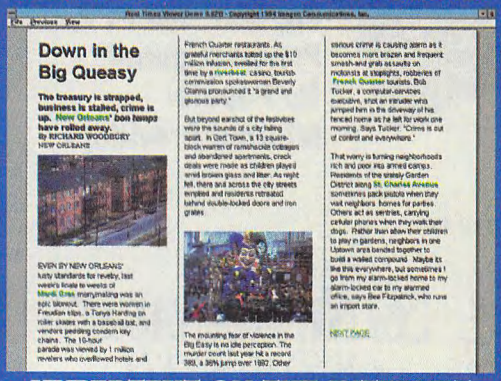

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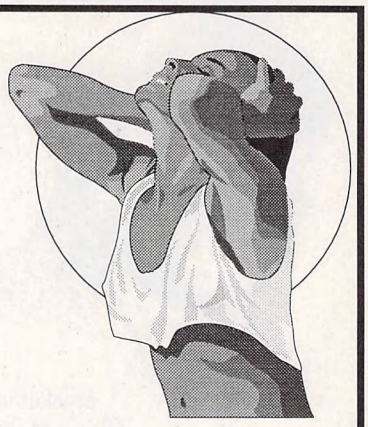

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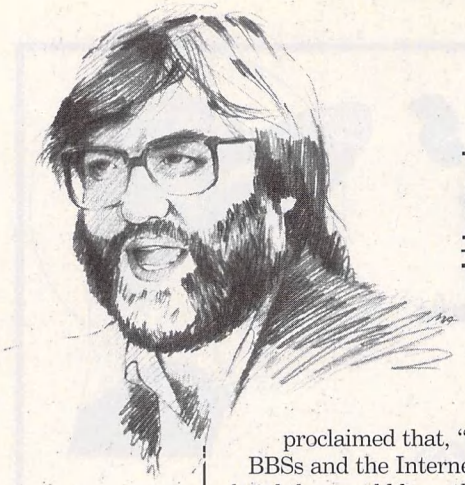

LEGALLY ONLINE by Lance Rose

THE COPYRIGHT ESCALATOR OF FEAR

Lance Rose is an attorney and writer practicing high-tech and information law in Montclair, NJ with the firm Lance Rose & Associates. He can be found on the Internet at **elrose@path.net**, and on CompuServe at **72230,2044**. He is also author of **SysLaw, the legal guide for online service providers**, available from PC Information Group at **800-321-8285**.

A few years ago, some of the more romantic net denizens proclaimed that, "information wants to be free," on BBSs and the Internet. The place was so lightly populated they could hear their own echos. Lots of juicy stuff passed from port to port, with nary a comment from the supposed copyright owners — centerfold ripoffs, Star Trek scripts, Windows icons with every cartoon character known to civilized man. Some dared dream of a new age where property ownership didn't work any more, and copyrights would just wither away.

In truth, large companies bulging with intellectual property assets didn't give a hoot about the online world. In the perpetual hunt for next quarter's profits, the online market was irrelevant, not even a blip on the radar screen of immediate returns. Anyone pestering the big companies about new online opportunities got an indulgent smile, a pat on the behind, and permission to do pretty much whatever they wanted. Online conferences sprang up everywhere, devoted to famous media and consumer products ranging from Twin Peaks to Harley-Davidson, on small bulletin boards as well as CompuServe and Prodigy. If anyone at the companies owning these products even took notice, they were happy for the free advertising, albeit it in a fringe medium catering exclusively to folks too computer-geeky to overlap much with their real target demographic.

Now everyone wants a heaping plate full of that hot online action. The big companies are taking it all back, securing their intellectual properties against the winds blowing in from the next century. Fighting is also breaking out, as the online latecomers find their own images and property under the control of others. Thus, MTV is fighting with its ex-veejay Adam Curry over his use of MTV.COM as an Internet domain name, despite letting him have it with their blessing over a year ago. Indian givers. More amusingly, test prep company Princeton Review picked up the domain KAPLAN.COM, named after their arch-rival in the business, Stanley Kaplan. Princeton Review claims they gave their site that name because it contains a comparison of their service to Kaplan's, but Kaplan's lawsuit says they're really doing it just to confuse Kaplan's customers. The word is that more domain name lawsuits are on the way.

But that's trademark litigation. Over in the land of copyright, we're seeing even more fighting. The cry of "information wants to be free," slides off the uncomprehending brows of the Big Copyright Interests. They are in the habit of cutting down infringements wherever they find them. The online world is just another arena of enforcement, and not a particularly bewildering one after these big companies hire net surfers to find the hotbeds of infringement. Compare the cushy comfort of walking an online beat to the mystery of tracking down infringements in Asian countries remote and obscure to the U.S., where local governments may not be especially eager to shut down local ripoff industries that help their countries get a leg-up against the imperialists. At least for online infringements in the U.S., domestic companies can use domestic courts.

At the same time, U.S. copyright holders now can see the net denizens thumbing their noses at them, seemingly so ignorant they think copyright law does not apply to online activities. To straighten these people out, many of the larger companies, as well as the government, are using infringement lawsuits to send a message to the online world that infringement does not pay.

Copyright lawsuits against bulletin boards and sysops proceed apace, an accelerating drumbeat of lawsuits and busts that only the news-deaf could ignore. On the civil side (non-criminal, where you sue for money instead of sending people to jail), for several years software companies, most notably Novell, have been shutting down pirate bulletin boards with relatively little fanfare. Then Playboy moved copyright enforcement into high publicity gear. First, it sued Event Horizons, a big bulletin board with lots of graphic images, and settled for a well-publicized half-million dollars. Not satisfied without a judicial decision, Playboy then obtained a court order against another bulletin board, Tech's Warehouse, again publicizing the event mercilessly. Now, the biggest civil suit yet by copyright owners against an online system is pending, in which 140 music publishers want to make CompuServe pay for letting its users upload and download files that can play music on your computer.

There has been a similar progression on the criminal copyright side. The FBI laid the groundwork over a year ago, with criminal seizures of the Davey Jones Locker and Rusty and Edie's bulletin boards, but no indictments at the time. Then came the indictment of David LaMacchia, an MIT student, on charges of wire fraud for covertly using MIT computers to run a bulletin board for trafficking in infringing software. Recently the owner of Davey Jones Locker was finally indicted from criminal copyright infringement, though Rusty and Edie's remains unindicted. And just a couple of months ago, five bulletin boards in Texas were raided on charges of copyright infringement. The pace is picking up.

The Davey Jones/Rusty and Edie situation is a study in how copyright prosecutions are being arrayed as an escalating parade of horrors to scare people away from infringing. Both bulletin boards were seized almost two years ago, yet neither was indicted for many months. Finally, in September, 1993, when Internet fever hit its

peak and media attention was assured, Davey Jones Locker was indicted. The Justice Department issued a big press release, crowing about its first criminal indictment of a bulletin board for copyright infringement. It goes on to state that the owner of Davey Jones Locker faces possible jail time, and notes that the prosecution will be under the old copyright law applicable when the system was seized, instead of the new copyright law enacted in 1992 with pumped-up criminal penalties.

Hmmm, guess what? Rusty and Edies' bulletin board was seized almost immediately after the increased criminal provisions were added. You can see it coming, the old one-two punch: Davey Jones Locker gets nailed under the old law, and then Rusty and Edie's really gets put away as the first BBS indicted under the new, industrial-strength criminal copyright law. If the goal is to scare other bulletin board operators into sheeplike observance of the copyright laws, this is how it's done. Just when you thought you sized up the risk of transmitting stuff that might be infringing, wham! — the government moves in to up the ante. The unfortunate upshot for Rusty and Edie is that they seem to be the fall guys in this scheme to create escalating fear. They could have a hard time escaping a really draconian sentence, if convicted. What good will they serve as examples in the fear parade, if the government cannot use them to show the world that you're in deep trouble when you step on the toes of the big corporate interests?

If Rusty and Edie are indicted and convicted, it would mean they gambled on the party line that copyright infringement is okay on the net, and lost big. They would be responsible for their own actions, of course. It would seem, however, that a bit of that responsibility should also be shared by all the yahoos who slapped each other on the back the past few years about finding a place called cyberspace where you can copy the works of others with impunity. If this had not become the prevalent net attitude, the blatant copyright infringements on the net would have been far less, and the large copyright owners would have had far less reason to try and scare to death anyone who might be contemplating an infringement.

A few of us lawyers have tried over the past few years to show non-lawyers how copyrights and other property really do function normally in online environments. But every time you would point out that infringing can get a person in hot water, someone would say, "they haven't got me yet." Well, they still haven't got most people. But if you're running a system that you know contains infringing materials and your number comes up, be prepared for the copyright prosecutors to play "can you top this" with your criminal sentence, in the hope that the example they make of you will scare a few more people away from their property.

I LOVE/HATE ONLINE REGULATION

Some people want to clamp down on new social and business developments even as they blossom. These folks are behind the National Information Infrastructure Task Force, a government effort toward regulating the online world. If we spend enough tax dollars on it, we might even figure out what needs to be regulated. There are others, who oppose all regulation automatically. To them, every attempt to regulate is a misguided blunder, screwing up the natural course of commerce and society.

Instead of discussing these opposed forces in the abstract, we can look at how they played out recently in an online regulation that almost happened. The "Exon amendment" was a proposed law tacked on to the Senate version of the Communications Act of 1994. The main purpose of the bill was to open competition between baby bells and cable operators, but it died out in the last days of this year's Congress. Senator Exon's little add-on was a moralistic attempt to regulate adult materials on online services. Specifically, it would have extended the existing FCC regulation of "900" number phone sex services, currently applied only to voice telephone, to all transmission of adult materials by electronic online services. It ended up scuttled along with the rest of this year's optimistic telecom bills at the end of September, as weary congressmen turned their attention from lawmaking to the fight to remain in office. Don't worry, the moralists are unceasing. The
Exon amendment or a law just like it will reappear soon, possibly in the same exact form.

Let's look more closely at what the Exon amendment would have accomplished. The existing regulation of phone sex services is in Section 223 of the Communications Act. It provides that obscene materials are absolutely forbidden, but permits the knowing supply of "indecent" materials on such services, as long as they take steps to keep out minors. The reason for this distinction is that obscene materials (the most extreme sexual materials) are not protected at all by the First Amendment guarantee of freedom of speech, and can thus be completely banned. Indecent materials, however (sexual materials which do not qualify as obscene, but may still be unsuited for children) are protected by the First Amendment for access by adults, but may be reasonably regulated to keep them away from minors.

The FCC enacted further regulations under Section 223, setting out age filtering procedures deemed legally adequate for phone sex companies that purvey adult materials. In legal lingo, these procedures create a "safe harbor" for the phone sex companies, a reliable means for avoiding legal action. One procedure is to require customers to use credit cards for access to the adult materials. The other is to perform direct age verification procedures, such as requiring proof of age, and having routine procedures for deleting unused access accounts. If these procedures seem easily defeated by any dedicated youngster, that's exactly how it's supposed to be. Remember, indecent adult materials are protected by the First Amendment. Legal age verification requirements, if they err at all, must therefore err on the side of being less restrictive, to make sure all adults can get at the materials without being wrongly identified and kept out as kids. A few kids will sneak in, but the phone sex company will not be penalized if it followed the safe harbor procedures. The Exon amendment would have extended these existing regulations to cover all online service providers, digital and analog, that knowingly provide access to obscene or indecent materials. It also seemed to make it illegal to "make obscene or indecent materials available," whether or not the service provider knew the material was being made available. Under this latter rule, every online system letting users call the Internet (which includes adult materials along with all its other information riches) would have to start doing age verification, even if it maintained only the most wholesome materials on its own system. Every system with Internet access might even have to filter newsgroups for materials that could easily be found obscene in some jurisdictions.

The law proposed by Senator Exon was entirely moralistic — an imposition of some peoples' moral values on the rest of society. To propel the proposal forward with a blast of outrage, he supported it with testimony on the Senate floor unfurling a supposed parade of horribles, such as the recent discovery of 1,000 dirty picture files in computers in the Lawrence Livermore Laboratory. The Exon amendment would stop all that.

The major online services, as well as the Electronic Frontier Foundation, greeted the Exon amendment with profound distaste. Much of their reaction was to the absurd provision that would result in regu-

lating online services simply because they provide access to the Internet. It's like making a bus company check the age of its passengers and refuse to take any children, because once they get off the bus they could head for an adult book store. But there was also reaction against the very idea of extending FCC jurisdiction to online services. Such an extension of authority was seen as bad in itself, regardless of the basis. It seemed to be simply the attitude that "regulation is bad."

Now, let's look at the Exon proposal from a completely different point of view. One of the most serious legal problems for online businesses today is exposure to laws and lawsuits in every state and city in the country, and potentially, throughout the world. Those of us who have done legal research across many states — as is common for securities offerings and franchising law questions — know what a massive, tedious project it can be just to answer one or two legal questions under the laws of many different states. Now, imagine doing that task for all possible legal questions, across hundreds of bodies of law, and across all 50 states. This is precisely the problem confronting online services today.

From this perspective, the Exon amendment can be viewed as an effort to help simplify and unify the law of obscenity and indecent materials online on a national level. While it was not explicitly drafted to preempt individual state laws, it could have been treated as preemptive in practice, and possibly in consequent case law. From this point of view, the features of the Exon amendment were a blanket prohibition of obscenity on online services (which is what we should all prudently presume, anyway), and a clear, useful "safe harbor" means for avoiding problems with indecent materials by using the age verification procedures. The only monkey wrench was that provision that seems to regulate all services, regardless of their own contents, if they provide access to other services or networks in which adult materials reside.

This "access" provision was indeed problematic, no matter how you looked at the rest of the proposal. It was created through an odd skewing of one of the existing provisions of Section 223. That particular provision does not even address online services, but deals with an entirely different subject: active, personal harassment of others by telephone. With a few added words, the Exon amendment would not only have expanded telephone harassment to e-mail harassment, but it would also expand the prohibited activities from deliberate, active harassment to merely running a system that makes available indecent or obscene materials, even if they reside on another system. It's hard to say whether this skewing was a deliberate misuse of the harassment provision to extend its reach to all electronic access services, or simply the result of overbroad, sloppy drafting designed merely to cover future technological forms of active harassment. In any case, it's a big mistake. It would unjustifiably burden information flow, denying access to the net to anyone under 18. It would be hard to see this provision surviving even the first court challenge

So let's say we got rid of the bad provision. Does this justify the response of the EFF and the large online services, attempting to strike the Exon amendment altogether? No, it doesn't; they would be throwing the baby out with the bathwater. The Exon amendment (minus the access provision) was a chance to wrap up all the moralists' objections to adult materials online with a neat safe harbor rule. Indecency law problems for online services are not going away. The only real choice for online services is whether to suffer through piecemeal regulation of adult materials under a crazy quilt of local and state laws, or achieve a uniform national standard permitting them to adopt a consistent strategy for managing adult materials. The Exon amendment could have been such a national standard.

So if another national-level proposal like the Exon amendment shows up, we should take a long look at how it can be leveraged to help online systems better know and control their legal exposure for adult materials. Naturally, we should strike any attempt at holding an online system responsible for the contents of other systems. And we should make sure such a law explicitly preempts all competing state regulations of adult materials on online services. After that, let's unify the hundreds of other laws out there, under appropriate standards. The best unification would be one guided by the First Amendment, a blanket limit on the total legal exposure any online system would need to suffer, although piecemeal unification remains a possibility at this juncture.

So, with the example of the Exon amendment in mind, we would like to offer the following generalization: When regulation covering online services is on the table, a response like "regulation is always bad," or "oh no, FCC is regulating online services," is not adequate to determine the wisdom or value of the legislation. Other needs, such as the need to unify and simplify the legal obligations of online services must be considered to decide which legislation is good, and which must be shot down. ◆

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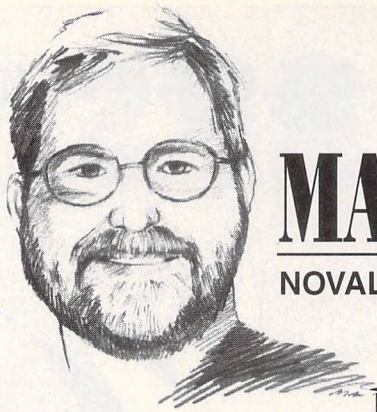

MACINTOSH NEWS

by Bill Gram-Reefer

NOVALINK TO SUPPORT WWW

Recently I added a new dishwasher to my kitchen. But I had to rip out some of the old flooring in the process. So then we needed to replace the entire floor. This led to relocating the stove and fridge in the garage so I could sand down the cement slab where it was cracked and uneven so I could install a new floor covering on a smooth base. During the process, I fired up the Coleman stove to bring the pasta to boil and employed the trusty Weber for most other culinary needs. Of course the new floor required a new color scheme, so that meant having to repaint the kitchen; the wife insisting on a trim color which prolonged the agony even further. We could have replaced the counter tops to match the new color scheme, but after three months I had to put my foot down somewhere. All of this, just to add a dishwasher.

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. Bill has been writing about Macintosh computers since 1984. E-mail Bill at: **reefer@netcom.com**

Similarly, ResNova Software has announced plans to redo its kitchen by promising to add support for World Wide Web (WWW) and hyper text mark-up language (HTML) in its 4.0 release of NovaLink Professional due before the end of 1994. According to Jon Kantor, CEO of ResNova, the new server is a first step toward a series of products that will be designed to help make the interface to the Internet and its services more user friendly.

The new NovaLink server will allow users without direct internet connections to access Internet mail, Usenet News, and WWW via modem, X.25, AppleTalk and telnet connections. The new user interface will slice and dice and provide easy access to resources and enable users to easily create HTML documents which support styled text, compressed images, movies and sounds. Additionally, hypertext links to any type of information resource, including e-mail, news, files, databases, and other hypertext documents will be supported. Users will be able to create home pages with links to their favorite areas on the WWW, and be able to send e-mail and post public messages that contain pictures and links to reference material. Sysops will also have an opportunity to further customize their service with hypertext-based navigational menus and online shopping areas. Sort of a BBS Cuisinart.

While it can be argued that a "home page" is more friendly than a command-line interface, it may not necessarily be more friendly than a desktop or a window metaphor. Furthermore, it's more than wishful thinking to expect ordinary people to build their own hypertext resource documents. Yet, a RIP-based front-end for WWW and other services may prove to be one tearless way to peel the onion. An interesting fly remains in the soup, however, for what happens to the overall look-and-feel of the software as an identifiable product with an established signature-look? For a system that prides itself on offering complete customization, a roll-your-own interface may be just the right recipe. But other BBS chefs face some tough decisions concerning how to support access to increasingly popular services without having to remodel the entire kitchen or end up serving a mish-mash of gerry-rigged, third-party potluck.

MOSAIC HANDBOOK DUE

O'Reilly & Associates made available in November a new software/book package for Internet beginners explaining how to use the Mosaic interface to navigate and tap into many of the rich information sources of the World Wide Web (WWW). The Mosaic Handbook for Macintosh, by Dale Dougherty and Richard Koman (**$29.95**, ISBN **1-56592-0906-1**) will be bundled with Enhanced NCSA Mosaic from Spyglass for the Macintosh 1.0 on a floppy disk.

The book/software package shows how to navigate with Mosaic, use it for FTP and Gopher functions, describes how to add external viewers, and how to customize the interface using screen elements, colors, and fonts. The book also covers Hypertext Markup Language (HTML) and how to create a home page complete with links to other servers. The handbook also will include the Global Network Navigator (GNN), the WWW service developed by O'Reilly & Associates. GNN contains many navigational aids to help users discover Internet resources, and supplies news and information services in areas such as travel, personal finance, education, and sports. O'Reilly & Associates; 115 Morris Street, Suite A, Sebastopol, CA 95472; **(800) 998-9938**.

DELPHIC LAUNCHES TERRANET

Scheduled for liftoff in September, Delphic Software (DSI) announced the creation of TERRANET, a privately sponsored, distributed network for FirstClass systems linked via TCP/IP gateways for quick transfer of messages from one site to the next. Delphic claims that its intelligent mail routing scheme written into the TERRANET Satellite software will ensure that mail reaches its destination in the shortest amount of time without any unnecessary costs.

TERRANET is billed as a logically organized, efficient, and maintenance-free network open to all FC sysops who agree to the basic rules outlined in Delphic's subscriber packet. Membership includes a connection to TERRANET, as well as the software necessary to join the network. Some features of the software include: preprocessed and compressed messages with an average reduction in transfer time of 50-80 percent

over current FC-to-FC gateways; intelligent routing, elmination of message loops, the ability to screen out excessively large files from being posted; and the ability to subscribe to conferences automatically without assistance from upstream administrators.

TERRANET is fully sponsored by Delphic Software, who will supply all personnel needed to administer the system, handle requests for membership, and deal with problem users and sites. In fact, all aspects of TERRANET will be remotely controlled from DSI using special commands built-in to the TERRANET satellite package that are accessible only to top-level DSI employees, ensuring security throughout the network.

TERRANET certainly addresses several of the well-documented shortcomings of OneNet, but this is a side issue that only the demagogues and fanatics will froth over. The real impact comes in learning to use the Internet as the methodology for the transfer of messages and linking of remote sites. The compression and processing of messages provided by the Satellite software is nice, eliminating loops is nice, finding a relatively stable sponsor to administrate some simple rules is okay, but the key to TERRANET is the transport itself. Now why hasn't FidoNet figured this one out? Can you imagine the money those sysops will save on their phone bills? Might even be able to buy a Power Mac with the savings!

DSI is currently looking for FC sites who are interested in helping distribute the backbone and administrators willing to become hubs. Requirements include disk space to handle messages, and the ability to call one of the TCP/IP backbone sites each night to transfer messages. Interested sysops should contact info@delphic.com.

While most Mac sysops drool over the prospect of a dream-boat sized BBS with 200+ lines and Cadillac server and hard drive arrays, most systems fall fairly short of that mark, at least to start. Over the years I have received lots of mail from sysops asking what the best set up is; should they go for the Quadra or get into a PowerPC 7100 or better. And whether they are schools, MUGs, small businesses or hobbyists, of course they don't have the money, or a grant, or a rich uncle to finance their expectations. My advice has invariably been, keep it small, work with what you've got then build it up over time until either your users demand better, or you can, over the objections of your spouse or vice president, afford to upgrade your system. This goes for hardware, drives, modems, you name it. Unless your name is Jack and you just have to trade the family cow for that bag of beans, living within your means, at least for BBSing, is the best place to start.

No slots, just two serial ports, 4Mb with a 40 Mb drive, the Classic is not exactly a worse-case scenario, but you get the picture. Processing speed and memory aren't a real issue here as much as drive speed and serial ports. While a fast external drive can help speed things up in terms of downloads, it's still a matter of having to go back into the Classic via the bus and then out through the not-the-best-engineered serial ports in the world. Hanging V.FAST modems off a Classic's serial ports is like putting a Hurst shifter on a 1966 VW Bug, all show and no go. Then there's the problem of connectivity, not to the outside world, but to your own internal system. It's just near impossible to run a two line system on a Classic and still be hooked into your AppleTalk network without some help.

Two adequate solutions I've found help open the horizon for Classic-based BBS platforms running System 7. Although I've written about Creative Solution Inc.'s (CSI) Hustler and Hurdler NuBus

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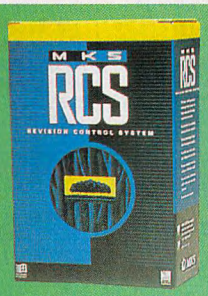

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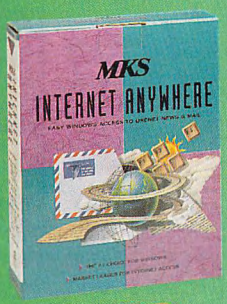

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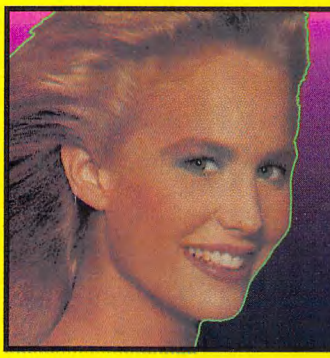

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boards in the past, the company also manufactures an external four-port model that attaches to the Mac via the SCSI port, the SCSI External Quad Serial (SEQS). The serial drivers on the SEQS box support full duplex serial communications on all channels simultaneously. Sustained rates up to 115,200 baud are possible. The SEQS uses two internal 68000 microprocessors with one handling the SCSI connection while the other handles the real-time serial activity. All I/O is buffered on board to ensure that no data is lost while the Mac's CPU chugs away at other tasks such as disk activity. While the SEQS driver consumes anywhere from 1-5% of the CPU's time, each multiple board consumes about the same, so in theory, you could daisy chain several of these together to support more than 4 lines. Some benchmarks provided by CSI from the performance of an SE30 showed a 25% slowdown when running four SEQS, each sending and receiving large data packets at 38,400 baud from each (16) port, a total throughput of over 100,000 bytes/sec.

I found the SEQS box extremely easy to set-up and configure. It's compatible with standard SCSI devices, and is CTB compatible and lists for under **$600**, a most modest way to increase one's growing BBS. And it handled 28.8 connections between a Supra and Hayes modem without difficulty. Coming soon, CSI plans to upgrade the SEQS box with a two line external Hustler box, which will also connect via the SCSI port. These ports are supercharged to support one 230,000 baud or two 115,000 baud port sessions, and because of some smart shopping by the folks at CSI, could retail for close to **$400**.

The nice thing about the SCSI port is you can daisy chain many other devices off of it. So with a SEQS box, you could still add your CD-ROM player, additional hard drive, backup, and Ethernet connector.

Network connector? Ethernet? Sure, why not. Both Farallon and Tut Systems make SCSI solutions for their plug and play network connectors, EtherWave and Silver Streak, respectively. If in using the Classic's two built-in serial ports for phone lines you still want to tie into your AppleTalk network, these devices will let you do it. You surely won't get Ethernet speed, but then, who does?

Tut System's SCSI Ethernet Connector is a part of that company's line of easy to install Ethernet connectors that require no special wiring. In its February 28, 1994 review, PC Week found, across all packet sizes, less than a one percent difference in performance when compared against 3COM and Farallon solutions. The **$249** SCSI connector is based on the same analog filtering technology that, in 10Base2 fashion, lets Silver Streak connect up to 30 devices in daisy-chain fashion to form an Ethernet network of up to 185 meters. In my case I was linking a Centris and a Classic so I could access my TeleFinder BBS over NetConnect. You simply connect your LocalTalk cable on each end to a Silver Streak SCSI connector and attach a SCSI cable from the connector to each respective SCSI port. Install the software, select EtherTalk from the chooser and you're networked. Took less than 10 minutes. While you hardly get LocalTalk speed, at least you can free up the serial ports for callers.

The Silver Streak connector also worked fine with the SEQS box, so on one Classic I could run six lines using four ports on the SEQS box, and the modem and printer port, and still take advantage of an AppleTalk connection. Options include getting a Dayna LocalTalk/EtherTalk splitter so you could add your LaserWriter if you wanted to bother. But hanging another box is pushing it, cause if you can afford to do more than one, it's time for the PowerPC. But until then, if you have to, now you know.

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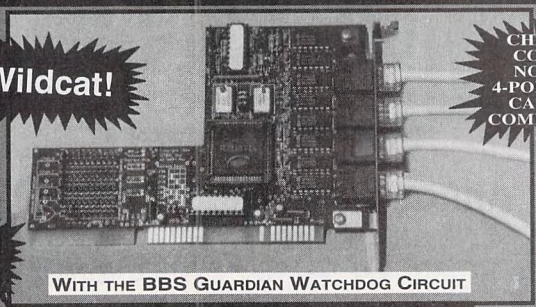
COM 1 - 4 Compatible	YES	No	No	No	Yes	Yes
Max Data Rate	460,800	57,600	57,600	57,600	38,400	57,600
Retail Price	$395	$695	$595	$595	$575	$499



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	Gtek BlackBoard-4	DigiBoard P/C4	Sealevel COMM+4	Arnet Multiport	Quatech QS-100D
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10 Conductor Full Modem Handshake Support	YES	Yes	Yes	No	Yes
16550 UARTS Standard	YES	No	No	No	No
Selectable IRQ's 2, 3, 4, 5, 7, 10, 11, 12, 15	YES	No	No	No	No
IRQ's can be Shared, Separate or both.	YES	No	No	No	Yes
Maximum Data Rate (BPS)	460,800	57,600	57,600	57,600	57,600
Watchdog Circuit	YES	No	No	No	No
Includes 6 Foot Cables	YES	No	No	No	No
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PRODIGY
1-800-776-3449

DELPHI by Walt Howe

DELPHI UNVEILS WORLD WIDE WEB SOFTWARE

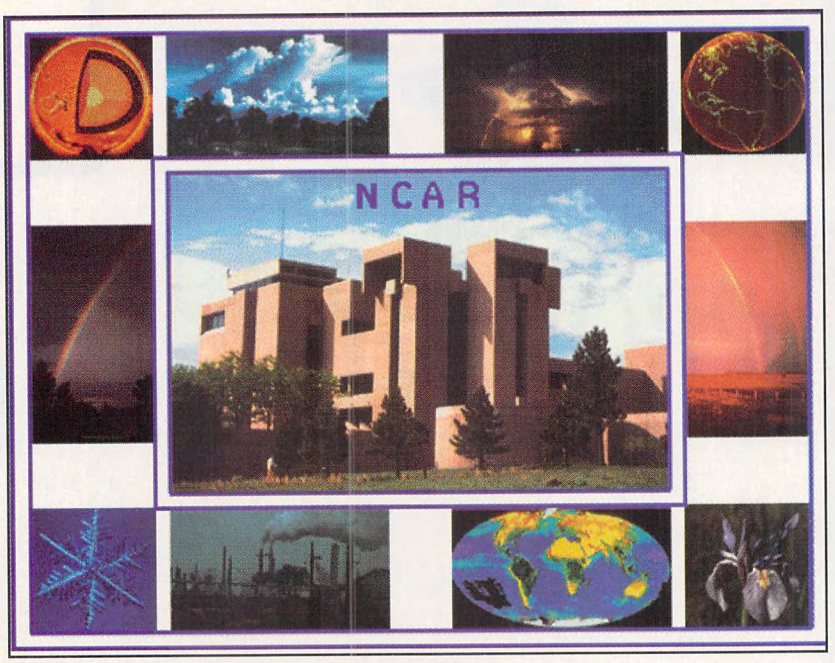
The World Wide Web is one of the most interesting developments on the Internet in the past year. The Web is an Internet de facto network that links resources through hypertext and hypermedia links from sites all over the world. It allows the embedding of graphics and sound into text displays, and complete layout of graphical pages instead of the usual unchanging typeface that most modem users see. It offers a new dimension in the presentation of information onscreen.

It is not completely new to most computer users. Macintosh users have worked with hypertext links for years. Recent Microsoft Help screens are built with hypertext links to related topics, and the convention is followed in software by many other companies too. A phrase will appear in a different color or typeface, and clicking on it jumps the reader to more information about that topic. To some, the most important aspect of it is that writing does not need to be linear, and non-linear approaches are closer to the way people really learn about things.

The Web has been the fastest growing part of the Internet over the past year. It has attracted the attention of many of the most creative net-builders. Features that have appeared on the Web have ranged from a beautiful display of art and architecture from the Vatican to an instructional kit on how to dissect a frog to features on Woodstock '94. The first picture is an example home page for the National Center for Atmospheric Research, captured from a Mosaic screen. Mosaic is Web software developed by the National Center for Supercomputing Applications (NCSA) that requires a direct Internet connection or a dialup SLIP or PPP account. With these connections, the user must run his or her own TCP/IP software, becoming a node on the Internet.

The graphics capability has also led to a number of illustrated online sales catalogs, where a user can open an account and order merchandise online. This aspect will undoubtedly grow rapidly in times ahead. For those concerned about such commercial practices violating the traditions of the nets, at least a catalog is not intrusive. Only those who want to access it need do so. It doesn't arrive unsolicited in your mailbox—at least not yet!

There are some obvious drawbacks to these new technologies, however. It takes an awful lot of bytes to draw a graphics page, and even more to provide digitized sound of any length. If you tried to recover the page pictured below with a 2400 bps modem, you could read Boardwatch while it loaded. With a 14.4 kbps modem, you can read the DELPHI article while it loads. Click on the sound button, and you wait for a 400K .AU file to transfer. No, you don't listen to it while it transfers. You need more speed—LOTS more speed! Although lots of people are dipping into the Web's graphics over 14.4 kbps SLIP connections, for the full effectiveness of the Web, you need Ethernet speeds. Generally, only large universities and corporations with high bandwidth Internet connections and their own fast networks can meet these requirements. And for a computer, you need lots of speed and memory, too. A 386SX-25 with 2



Mosaic Home Page of the National Center for Atmospheric Research

Walt Howe is the Internet Special Interest Group Manager on DELPHI. He has sysoped during the past 12 years for several BBSs; the old Source network, CompuServe, and Delphi. He is the co-author with Steve Lambert of the current book **Internet Basics, Your Online Access to the Global Electronic Superhighway**, available in most bookstores. Walt has also written a number of user manuals for various computer companies, including Delphi. Walt can be reached by e-mail as **walthowe @delphi.com.** A five hour free Delphi membership is available by dialing **800-695-4002** by modem and using the password **INTERNETSIG.**

megs of RAM and basic VGA graphics will slow things down as much as a 2400 bps modem will, if the software will run at all.

Despite the talk of 25 to 30 million people on the Internet, that figure refers to those with at least an e-mail connection. The number of those who can support the high speed connections and computer power for full support of the Web are far smaller. No one can say with any certainty how many people have this kind of power. It is probably under a million worldwide.

So what does this have to do with DELPHI? DELPHI's top dialup speed is 14.4 kbps, and it has no support for any graphics other than a simple Windows or vt100 graphical interface. You cannot use the Mosaic program that produced the NCAR screen with DELPHI. Eventually, DELPHI will have such capabilities as available connection speeds increase and more and more people have the fast hardware required. But DELPHI is offering Web support now. How can it?

The answer is that even without the supporting graphics and sound, the hypertext approach is valuable. DELPHI has developed software that runs with its gopher software to display Web text and onscreen link selections. DELPHI is calling the combined software, the Navigator. You can follow all the text links, and if you want the graphics, you can download them. It's not as pretty, but it is functional, and succeeds in tapping much of the information and fun of the Web.

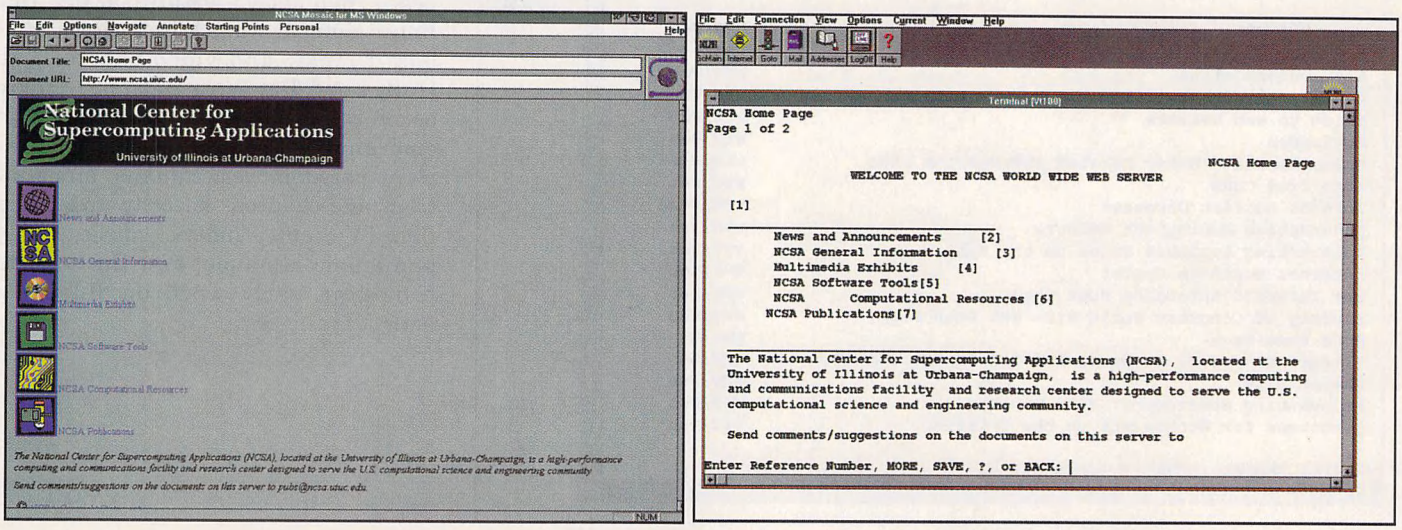
NEW ON DELPHI

The number of Custom Forums continues to grow rapidly as members take advantage of the opportunity to create their own Forum. Here is the latest list of new Forums:

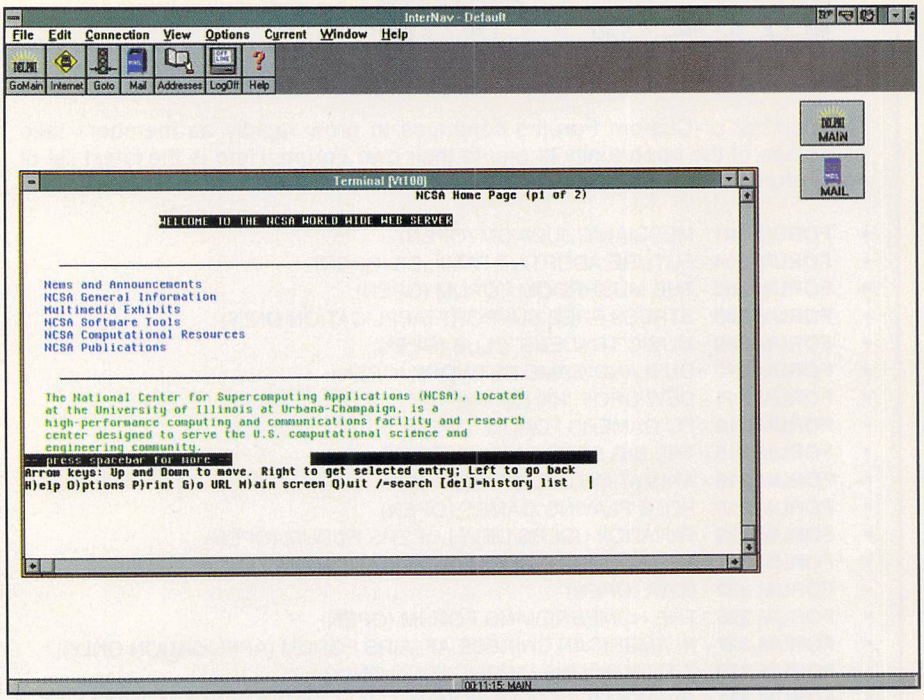
- **FORUM 301** - MESSIANIC JUDAISM (OPEN)
- **FORUM 304** - FUTURE ADOPTIVE FAMILIES (OPEN)
- **FORUM 306** - THE MUSHROOM FORUM (OPEN)
- **FORUM 308** - STRESS FREE SUPPORT (APPLICATION ONLY)
- **FORUM 309** - MUSIC TRADERS' CLUB (OPEN)
- **FORUM 310** - OUTLAND GAME NETWORK (OPEN)
- **FORUM 311** - DEW DROP INN (OPEN)
- **FORUM 312** - PC GAMERS FORUM (OPEN)
- **FORUM 315** - THE BIG BEAT! ONLINE (OPEN)
- **FORUM 316** - ANIMATION GALLERY (OPEN)
- **FORUM 319** - ROLE PLAYING GAMES (OPEN)
- **FORUM 320** - PARADOX USERS/DEVELOPERS FORUM (OPEN)
- **FORUM 321** - THE BUDDHA'S ROOM (APPLICATION ONLY)
- **FORUM 322** - JOTA (OPEN)
- **FORUM 325** - THE HOMEBREWING FORUM (OPEN)
- **FORUM 327** - N. AMERICAN CHINESE AFFAIRS FORUM (APPLICATION ONLY)
- **FORUM 329** - Z-TALK ONLINE (APPLICATION ONLY)
- **FORUM 331** - JEWISH LIFE FORUM (OPEN)
- **FORUM 332** - BARROW AT KGSM (APPLICATION ONLY)
- **FORUM 333** - TIME OUT (APPLICATION ONLY)
- **FORUM 340** - GUM CARD TRADING POST (OPEN)
- **FORUM 341** - THE ONE WAY (OPEN)
- **FORUM 342** - ONLINE EDUCATION (APPLICATION ONLY)

The next two pictures show the same screen as it appears in a Mosaic presentation and in DELPHI's Navigator. In Mosaic, you click on the title you want to link to and read. In DELPHI's version, each selection is numbered, and you either double click on the number or you type it. It gets you to the same places and shows you the same text.

There is another type of Web software called lynx that uses limited vt100 graphics, but is not capable of showing the pictures that Mosaic can. Developed at the University of Kansas, it allows point and click access and provides full screen cursor movement as needed, so that information can be typed into forms or blanks onscreen. This form's capability allows some functions that the DELPHI Web software does not



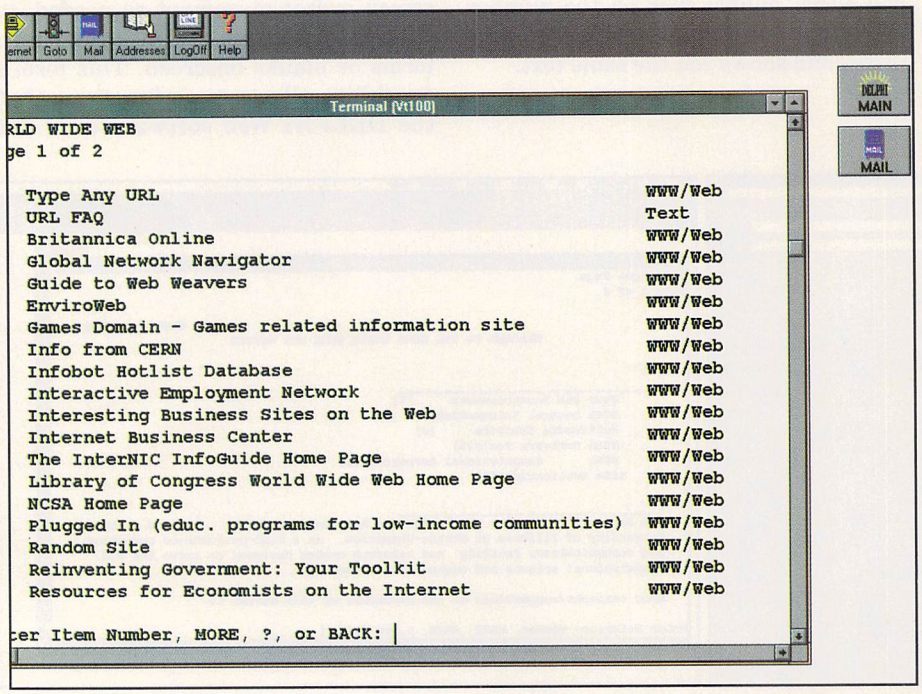
NCSA's Home Page shown on Delphi's Navigator (left) and Mosaic for Windows (right)



NCSA's Home Page shown through Lynx software

support at present. Lynx is runnable from DELPHI by telneting to other sites, and DELPHI will probably add lynx software, too, to eliminate the need to telnet elsewhere. The reason DELPHI didn't go directly to lynx support is that it can run slowly and haltingly when accessed through Sprintnet or Tymnet dialup packet nets. It requires the setting of HOST-ECHO for proper display when these nets are used, and this builds in some screen delay in seeing the results of keypresses. Another picture shows the same NCSA screen when viewed through lynx software, accessed by telnet to Cornell Law School from the Navigator software menus.

DELPHI has added a new WORLD WIDE WEB menu to its main gopher/Navigator menu. This is an eclectic collection of interesting Web sites that is changing almost daily. The picture shows the menu as it appeared on the evening of September 14th.



Web sites shown on Delphi's Navigator menu September 14th

Web sites are included routinely in other Navigator menus, so that you will find on any menu a mix of original materials, gopher, telnet, web, ftp, and even newsgroups that fit the particular topic of the menu. Gopher/Navigators and newsgroup menus are being routinely added to each SIG and Custom Forum menu throughout DELPHI. There are therefore, hundreds of specialized Navigator menus, each run by experts in their area of interest. It gives DELPHI the potential to be a source of information unmatched anywhere else in cyberspace.

BPI ENTERTAINMENT SIGNS WITH DELPHI

Delphi Internet Services Corp. has signed an agreement with BPI Communications, Inc. to carry the BPI Entertainment News Wire online. Offering full daily coverage of breaking entertainment news, BPI Entertainment News Wire will allow Delphi members to access on-the-spot news covering all areas of entertainment including films, television, videos, music, theater and books. Articles from BPI staff reporters from publications such as The Hollywood Reporter, Billboard, Back Stage and Musician Magazine will be featured on the service.

BPI Entertainment News Wire offers exclusive advance features from each BPI title, combined with original material from outside contributors such as The Boston Globe, to create a comprehensive daily view of entertainment news. Well-known features on the BPI Entertainment News Wire include: Billboard music and video charts; The Hollywood Reporter national movie boxoffice results; major interviews with emerging and established entertainment personalities; columns aimed at teens and children; celebrity updates in film, TV, country and rock music; a daily pop music almanac; and Eurocharts providing early word on Europe's hottest music. ◆

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BOARDWATCH MAGAZINE

BBS SOFTWARE VENDORS

November 1994

Product	Company	Voice	FAX	BBS	Platform	Tele Lines LAN	Tele Lines PC	MultiTasker	LANLogons	FIDO	Internet	QWK	Other	Chat	Price:MAX	Price:MIN
CNet Pro 3	Perspective Software	313-537-6168	313-537-5942	313-255-2466	Amiga	Unlim	100	OS	Y	I	I	I	J	Y	$229.95	$229.95
CocoNet	Coconut Computing, Inc	619-456-2002		619-456-0815	UNIX	1000	-	OS	Y	N	I	N	N	Y	$18,995	$395
DLG Professional	Telepro Technologies	403-341-7826	403-341-7826	403-347-3262	AMIGA	Unlim	29	OS	N	I	3	3	N	Y	$299	$299
Excalibur BBS	Excalibur Communications, Inc	918-496-7881	918-491-0033	918-496-8113	Windows	Unlim	8	OS	Y	3	3	3	N	Y	$349	$199
EXCELSIOR! Pro	Sycom Design Software	313-774-2153	313-772-5802	313-772-6442	Amiga	Unlim	Unlim	OS	N	I	3	I	N	Y	$199	$199
Faulken	INFO*Share, Inc	703-791-2910	703-791-2910	703-749-2889	DOS	?	64	I	N	3	O	I	I	Y	$999	$149
FirstClass	SoftArc, Inc	416-299-4723	416-754-1856	416-609-2250	MAC	100	22	OS	Y	3	O	N	I	Y	$3450	$95
GAP	GAP Development Co	714-496-3774	714-496-3774	714-493-3819	DOS	100	16	DV	Y	3	3	I	Y	Y	$359	$79
Hermes II	Computer Classifieds	206-643-2316	206-643-7830	206-643-2874	MAC	10	10	OS	Y	3	3	N	N	Y	$95	$95
hi-BBS	XBR Communication	514-489-1001	514-489-4966	514-489-0445	MAC	130	?	OS	Y	N	O	N	N	Y	$3400	$70
Kitten	TelPro Technologies	804-442-5865	-	804-442-5867	DOS/OS2	999	?	OS	Y	3	3	N	N	Y	$195	$195
Magnum BBS	Gilmore Systems	805-379-3210	805-379-1341	805-379-3450	OS/2	Unlim	32	OS	Y	N	N	I	N	Y	$900	$75
Maximus 2.01	-	-	-	613-634-3058	DOS/OS2	255	255	DV	Y	I	3	I	3	I	FREE	FREE
MEGAHOST	ASCII Computer Enterprises	-	-	209-836-2402	DOS	10	8	DV	Y	3	3	3	N	Y	$49	$49
Multi-Net	Multi-Net Communications	503-883-8099	503-883-7879	503-883-8197	OS2	999	12	OS	Y	N	N	I	N	Y	$895	$195
Novalink Professional	ResNova Software Inc	714-379-9000	714-379-9014	714-379-9004	MAC	Unlim	40	OS	Y	3	I	N	N	Y	?	$300
OPUS-CBCS		214-528-4687	-	214-528-4943	DOS	255	1	DV	N	I	3	3	N	Y	Free	Free
PCBoard	Clark Development, Inc	801-261-1686	801-261-8987	801-261-8976	DOS	1000+	16	DV	Y	I	3	I	3	Y	$10000	$170
PowerBBS	Power Computing	516-938-0506		516-822-7396	Windows	Unlim	9	OS	N	3	I	I	N	Y	$189	$99
Powerboard BBS	NUIQ Software, Inc	914-833-3479	914-833-3623	914-833-1479	DOS	999	8	DV	Y	I	3	I	Y	Y	$2300	$99
ProBoard	ProBoard International	612-537-8655	612-537-8613	612-537-8659	DOS	255	8	DV	Y	I	N	I	N	Y	$49	$49
ProLine	Morgan Davis group	619-670-0563	619-670-9643	619-670-5379	APPLE II	1	1	-	Y	N	I	N	N	N	$159.95	$159.95
RATsoft ST	ROdent Laboratories Software			801-756-2901	ATARI	?	?	-								
RemoteAccess	Wantree	913-441-1336	913-441-0596	913-441-0595	DOS	250	1	DV	Y	3	-	3	N	Y	$529	$149
RoboBoard/FX	Hamilton TeleGraphics	800-363-7626	819-685-0994	819-682-7771	DOS	255	8	DV	Y	3	O	N	N	Y	$400	$95
RyBBS	The Ryco Company	414-962-5967	-	414-962-1097	DOS	9	4	DV	Y	O	N	3	N	Y	$175	$75
Sapphire	Pinnacle Software	514-345-9578	514-733-8644	514-345-8654	DOS	1	1	-	N	N	N	N	N	Y	$45	$45
Searchlight BBS	Searchlight Software	216-631-9290	216-631-9289	216-631-9285	DOS	Unlim	10	DV	Y	I	3	3	3	Y	$399	$99
Second Sight Software	FreeSoft Co.	412-846-2700	-	412-846-5312	MAC	2	2	OS	Y	3	N	N	N	N	?	$199
SpitFire BBS	Buffalo Creek Software	515-225-9552	-	515-225-8496	DOS	255	1	DV	Y	3	3	I	N	Y	$85	$85
Synchronet	Digital Dynamics	714-529-6328	714-529-9721	714-529-5313	DOS	250	10	DV	Y	I	3	I	N	Y	$399	$99
TBBS	eSoft, Inc	303-699-6565	303-699-6872	303-699-8222	DOS	-	64	I	N	O	3	O	N	Y	$1995	$295
TEAMate	MMB Development Corp.	310-318-1322	310-318-2162	310-318-5302	UNIX	Unlim	-	OS	Y	N	O	O	N	Y	$125000	$2000
Telefinder	Spider Island Software	714-669-9260	714-669-1383	714-730-5785	MAC	200	20	OS	Y	3	3	N	N	Y	$2000	$425
The Major BBS	Galacticomm, Inc.	305-583-5990	305-583-7846	305-583-7808	DOS	256	256	I	Y	3	O	Y	Y	Y	$10717	$259
TinyHost	Bruce Krobusek	716-924-8284	716-924-4193	716-924-4193	DOS	1	1	DV	N	N	N	N	N	Y	$25	$25
TriBBS	TriSoft		207-941-9388	207-941-0805	DOS	255	4	DV	Y	O	3	O	N	Y	$75	$75
TSX-BBS	S&H Computer Systems, Inc	615-327-3670	615-321-5929	615-320-1820	DOS	Unlim	256	I	Y	O	O	I	O	O	Unlim	$300
UltraBBS	CDB Systems, Inc	303-444-7071	303-444-0035	303-642-7463	DOS	Unlim	4	DV	Y	I	I	I	Y	Y	$75	$75
Virtual BBS	Virtual Technologies	210-787-2443	616-399-8934	616-399-4818	DOS/OS2	1024	16	DV	Y	I	3	I	I	Y	$999	$99
Wildcat!	Mustang Software, Inc.	805-873-2500	805-873-2599	805-873-2400	DOS	250	8	DV	Y	3	O	I	O	Y	$799	$129
WWIV	WWIV Software Services	210-631-6090	-	210-631-5841	DOS	999	8	DV	Y	3	3	3	N	Y	$320	$80
Z/Max XChange	Z/Max Computer Solutions, Inc	315-635-1882	315-635-1908	-	UNIX	Unlim	-	OS	Y	N	I	N	N	Y	?	$695

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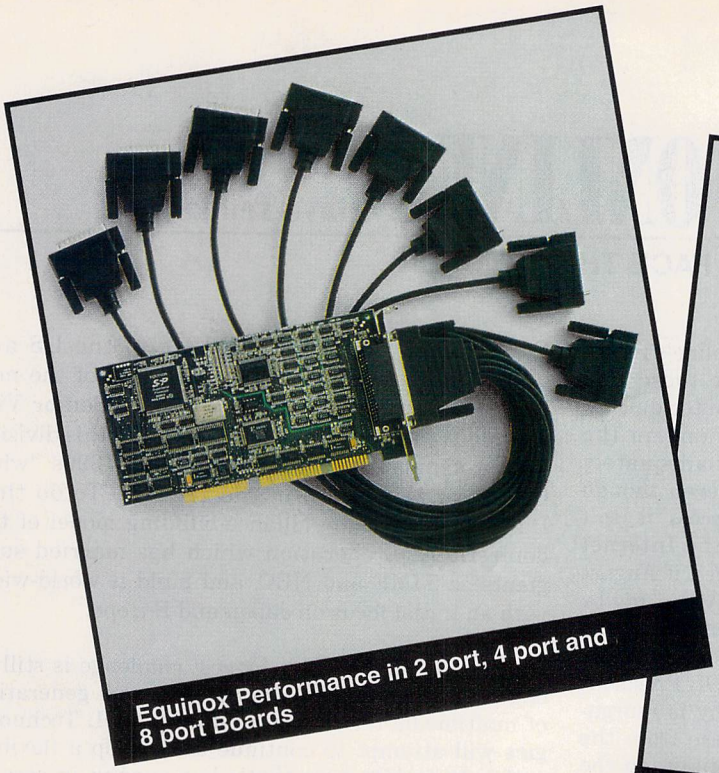

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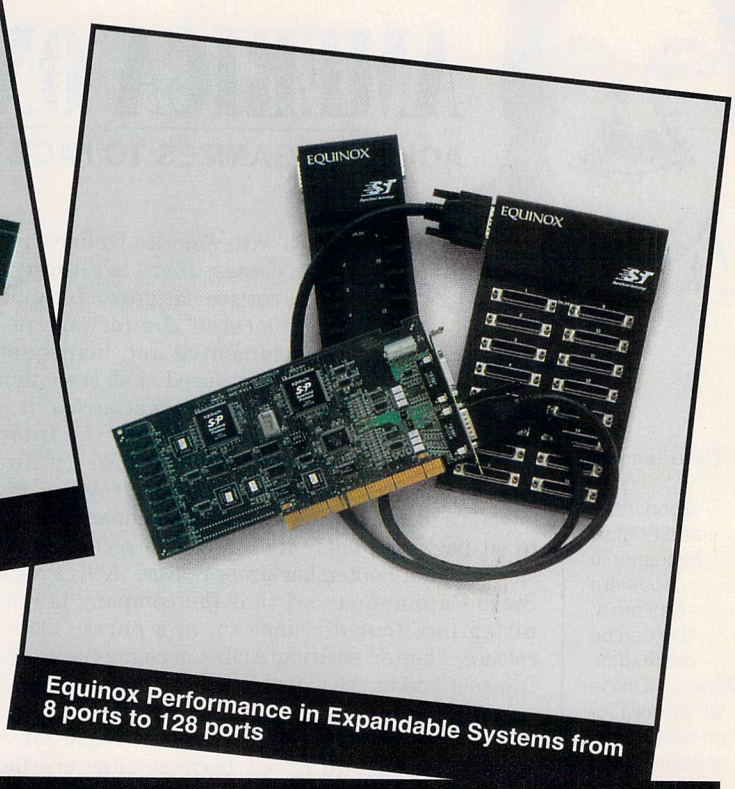

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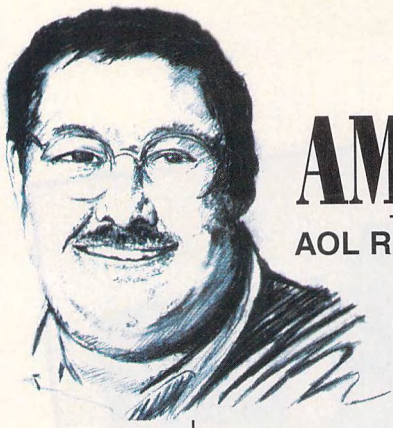


AMERICA ONLINE

By Dave Tennant

AOL REORGANIZES TO FACE THE FUTURE

Dave Tennant is an Economics and English Instructor in Southern California. He can be reached on America Online at "Dtennan" or on the Internet at dtennan@eis.calstate.edu

Even with America Online's recent successes, there are those who feel the service has grown too quickly, that several of the forums on the service are poorly implemented and inadequately maintained. Some have groused that even though AOL was the first to provide Internet access, it isn't developed enough to get one far into the Internet (looking for say, Reliefnet on WWW). Well if August and September were banner months for AOL - and by anyone's measure, they were - the company is not one to sit back and enjoy its new name recognition and success. In a September press release, AOL President Steve Case announced that the company is reorganizing into four divisions to, in a phrase from the release, "better position AOL for competition on the Internet and in the global market."

The reorganization may be what's needed for AOL to get its house in order, because they are facing some stiff competition in the upcoming multimedia fight. Word has come the four divisions or "operating companies"are AOL Services Company, Internet Services Company, AOL International, and AOL Technologies. All will report to President Steve Case but will have different mandates for operation.

Telecommunications veteran Ted Leonsis (a co-founder of Redgate Communications) is the president of AOL Services Company, which will continue to provide the basic online service while at the same time attempt to take over the number one position from rivals CompuServe and Prodigy. They may have already done this in the eyes of some. If you've been listening to commercials lately, America Online is almost always mentioned first or second, and then Prodigy or CompuServe. Yet stiff competition is in the making with eWorld, Ziff-Davis, and Microsoft's new ventures into the online world in the race to develop "electronic markets" that marry information, communications and transactional capabilities.

The Internet Services Company will be led by AOL President Steve Case. Ever since AOL became the first online service to provide Internet access, other services have jumped on the bandwagon. AOL has been slow to provide FULL access, with many searches in Gopher leading to blind alleys and dead ends. In an attempt to regain the leadership position in making the most easy-to-use GUI for the Internet, the Internet Services Company will provide AOL users with hopefully simple and affordable access to Internet features such as World Wide Web, Telnet, and FTP. Case said AOL's Internet Services Company would be "Internet-centric."

Expanding from their base here in the US and moving to foreign markets is the focus of the new AOL International division. Former Senior Vice President Jack Davies takes the helm of this division with a mandate to make AOL in the 1990s "what CNN and MTV were in the 1980s." To do this, Davies will take the alliance-building model of the domestic AOL operation which has married such giants as TIME and NBC, and build it world-wide, with an initial focus on Japan and Europe.

In the meantime, AOL's biggest challenge is still to engineer a software interface for the next generation of multimedia telecommunications. AOL Technologies will attempt to continue to develop a flexible, scaleable architecture that's low enough in cost to keep AOL competitive, something which AOL has always done well! Mike Connors, an AOL tech guru since 1992 who was also instrumental in the early development of the Internet, will lead this division.

This reorganization comes at a critical time, when everyone is trying to gauge the direction of this burgeoning market. An interesting case study in this is one of AOL's competitors, Prodigy. IBM and Sears founded the service upon the mistaken notion that it would be a shopping service for consumers who happen to own computers, not an information online service. After pouring millions (maybe billions) down a sink hole, they discovered a few things and their eyes were opened. But the ONE smart move they made when they got started was that they built special statistical gathering capabilities into Prodigy. Added with information akin to Television's Neilson Ratings, they were able to learn that their users were more technical than they originally thought and that their highly touted "content" was nothing more than something akin to a nice lobby in a hotel; guests expect it but that's not why they come.

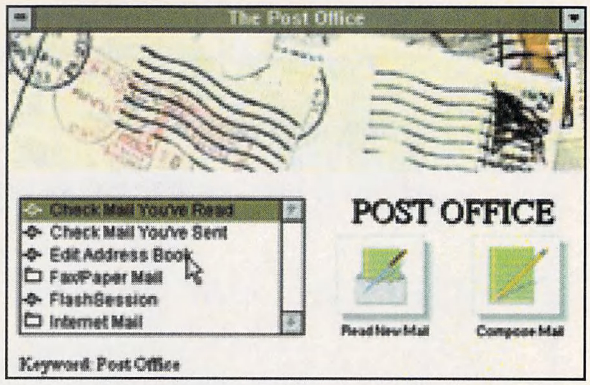
Logging on with AOL for Windows v 2.0

Prodigy has discovered forums (of which they now have over 1100) are the real attraction. AOL's forums appear to be its weakest area. They have been hastily thrown together; several of them are sometimes not too well-maintained, and there just doesn't seem to be enough emphasis on maintenance and improving them. Instead, all the resources are in adding more alliances and changing the look and feel - good emphasis - but not enough in and of themselves. The whole situation sort of reminds me of California's Hearst Castle — forever under construction surrounded by construction crews while its owner lived in a hotel. Eventually, that white elephant proved too large to use and too expensive to maintain; it was later donated to the state and turned into a museum.

AOL users are looking forward to more additions and improvements in the look and feel area, plus more multimedia. But if AOL doesn't start tightening up what they have now, their retention casualty rate may rise even higher. The other day I helped a friend get an online membership with the old Windows software, and couldn't help but think of how much further the new software will go in retaining members. Its interface is smartly designed and easy to use. For those of you who haven't seen it, let me offer you a preview.

SOME HIGHLIGHTS ABOUT THE NEW INTERFACE

In my last column I wrote a little about some of the coming attractions of the new AOL interface for Windows. Windows AOL version 2.0 sports wonderful picture-like graphics at almost every turn. You'll need Windows to be configured for at least 256 color or the new screens will look "kinda crummy." The Windows version of AOL has always been, to my way of thinking, the easiest of the AOL versions to use because of the quick buttons across the top of the screen. These buttons remain in the new version and retain the same functionality, but the buttons are different.



AOL Post Office

The first button to the right is a mailbox displaying New Mail, with a compose-mail paper and pen button directly to the right for writing letters offline. AOL has listened to people who have suggested AOL make improvements in composing off-line. The new feature "Flash Sessions" now makes it possible to go online directly or at times you designate to send mail prepared offline or queued to "Send Later." You can opt to retrieve mail that is waiting for you, or even cooler, download software files that you've tagged as part of your browsing and saved to the Download Manager. (Be careful though; this can get expensive as you can imagine!) All of these functions are managed from the Flash Session feature. To activate "Flash Sessions," go to the Mail menu on your menu bar. The program will offer several dialogue boxes with helpful information and directions about the options you have.

I utilize three screen names on AOL, and accordingly, I have a flash session set up for all three. The Flash Session is also best used if you compose all your mail offline and then assign to "Send Later." I find this especially handy because we're a one line family and my wife goes crazy when I tie up the phones for long periods of time during the day. With Flash sessions, I schedule downloads and mail drops in the early morning hours. The setup is easy. The only two caveats I would offer is that 1) Flash Sessions features only become accessible after the America Online account registration is official, and "Guest" sessions have no mailboxes and no Download Manager and cannot be used for Flash Sessions, and 2) sometimes the feature will have a glitch and you may find yourself online for a half hour or so, (as I did one morning), so leaving flash sessions unmonitored is sometimes a gamble. You can store as many files or e-mail letters in a Flash Mail mailbox as there is available disk space on your computer; the largest message that can be stored and displayed is 64K. If you don't want a Flash Session, just deactivate the feature in the dialogue box, or don't have AOL running.

AOL for Windows v 2.0-Main Menu

A QUICK WAY AROUND AOL

One of the new buttons on the side of the AOL Main Menu is "In the Spotlight," which can also be accessed from the speed bar (a searchlight button). "In the Spotlight," acts as a sort of editor's page of a magazine, showing off the latest features, entertainment and forums, as well as news stories. "In the Spotlight," also includes a button called the "Post Office," which offers a slick new picture and quick and easy access buttons to Read and Compose New Mail. (Hint: the graphics here are especially sweet and you need at least 256 colors but probably more to really enjoy them). Check the mail you've read, the mail you've sent, edit your address book, create Fax and Paper mail, carry on a flash session, and finally compose or check on Internet mail.

The big red question mark (fifth button from the left) is a quick access into the free area of AOL where you can ask questions and explore the service. The button with the AOL symbol under a magnifying glass is the quick button to the Directory of Services, which can also be accessed through "^K - Dirofservices." The People Connection button, displayed by a gal whispering into a guy's ear, is a new button which takes you to the forum "Secret Cyberspace." Actually a forum for chatting and the old People Connection forum, it has a list of rooms you can visit such as Center Stage, PC Studio, Chat References, and something you'll

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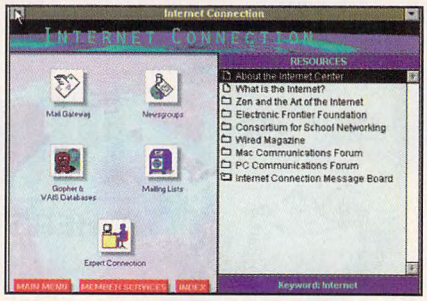
now find in many areas of AOL, Parental Control.

Parental Control is a new and much-needed feature on AOL (assuming you're a parent). You can block instant messages, person to person communication, all rooms - people connection and live chat areas, member created rooms, or block conference (special interest) rooms - those with the games. Your child may be enterprising and try to activate parental control from the account and lock you out, but AOL has thought of this and only allows activation of Parental Control from the Master Account. It is important, therefore, that you only allow your child access to AOL through their own screen name and not through your master account.

The Quotes and Portfolios button gives you quick and easy access to stock market news and information. The Extra button with Today's News features regularly updated top stories from Comtex News Service. Something AOL excels in is the "search the news" button which allows "term," AND "term" OR "term" NOT "term" searches to specify the items you are searching for, and separate them from the persiflage. This is a powerful feature for searching all the news databases on AOL, and they also work in all the search functions across the board on AOL. The AND, OR, NOT functions work in software searches, news searches, file searches, and anywhere else the search function is employed.

Center Stage is the key feature of the new AOL. Located in the middle of the quick button bar, it is the fast and easy entry way to instant communication, sort of like going to a virtual theater or coliseum. Keyword "Center Stage," "Coliseum," "Globe," or "Odeon" and there you will be. The Rotunda is like a huge meeting hall where you find events and schedules, download rotunda transcripts and send feedback to event participants. Click "Welcome to Center Stage" or "Meet the Center Stage Staff" to acquaint yourself with this new and highly interactive area.

The New Internet Button, an icon of a globe, will take you to Internet access for Gopher, WAIS, newsgroups, mailing lists, expert connection, and from this screen, buttons that will take you to the main menu, member services, or an index. The Resources button in the Internet area has features for the new user... What is the Internet? About the Internet, Zen and the art of the Internet, The Electronic Frontier Foundation, and the Consortium of School networking. Wired Magazine,



Internet via AOL

Mac Communications Forum, the PC Communications Forum, and the Internet Connections Message Boards are also now featured prominently in the new Internet area. The NEW button provides a listing of all the new features on AOL.

What's new as of September? AARP has joined AOL, as has the Mclaughlin Group, The Capitol Connection, The Strike Zone, Golf Course and Resorts, Weather News, WordPerfect Magazine, Kaplan Online, NEC Technologies, TMS TV Source, Data Times Sports, DC Comics, Multimedia World, and as of late July, Massachusetts Government Forum. If you haven't gotten your new version of WAOL in the mail, look for it. It should be coming soon. Those of you who are using the new Mac software, I'd love to know what you think; drop me a line. ◆

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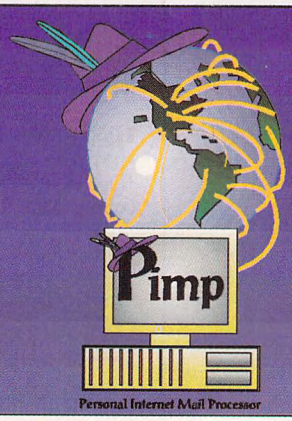

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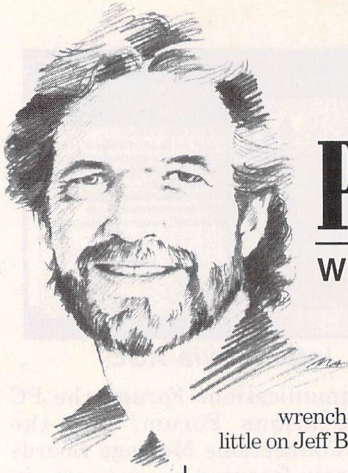


PRODIGY by Ric Manning

WHERE'S DAVE? PRODIGY'S RACE LINK HITS THE WALL

Ric Manning writes about computers and technology for ***The Courier-Journal*** in Louisville, KY. His weekly column on consumer electronics is syndicated through the ***Gannett News Service***. Ric reads his e-mail at **ricman@iglou.com** on the Internet, **72715,210** on CompuServe and **USJM92A** on Prodigy.

Picture stock car driver Dave Marcis charging into a turn at the GM Goodwrench Dealer 400 in Brooklyn, Mich., trying to gain a little on Jeff Bodine and Rusty Wallace.

As he wheels into the straightaway, Marcis glances at his dashboard. There on the video monitor is a question from a racing fan in Oshkosh: "Dear Dave, I've been following your career for years. Did you ever run at the Salem Speedway?"

Marcis guns his Chevy Lumina past Bill Elliott's Thunderbird and reaches for the keyboard.

Steve Roberts, who once toured the country on a high-tech recumbent bicycle, could pedal and answer e-mail at the same time using keys mounted on his handlebars. But it's hard to imagine a stock car driver finding time during a race for an electronic chat.

Yet that was the picture Prodigy created in late August when it trumpeted "another first in the online industry" in a press release about its new association with Marcis and NASCAR racing. Prodigy promised "live, real-time chat sessions" between Prodigy members and Marcis's pit crew. In addition, through a radio hookup between the car and the Marcis pit crew, Prodigy said "Marcis himself will also 'chat' with members and answer questions."

But many of the fans who logged on during the Sunday afternoon race hoping for a driver's-eye view of the race were destined to be disappointed.

11:55 — The start of the race is 35 minutes away and there should be plenty of action in the pits. I log on to the NASCAR Race Room in Prodigy Chat, but there's no sign of anyone connected to the race.

Three people are talking, but not about racing.

"Where's Marcis?" I ask.
"I think we're going to be able to chat with the pits," says one chatster. "This should be cool."

I hang around for another 10 minutes, but there's still nothing from the race.

12:15 — I Jump to NASCAR. There's a short news report about driver Ernie Irvan's crack-up the day before the race, but nothing about Marcis or about live chats.
1:20 — I return to the NASCAR Race Room in chat. Now there's some conversation going on. But wait, it's two guys talking about fantasy football leagues. I wait around, but no one seems interested in racing. And there's nothing from the Goodwrench pits.

1:40 — I try the Sports Bulletin Board. The opening screen is another promotion for the race day chat. The billboard directs race fans to the NASCAR Race Room for trackside poop on the race.

"Who knows," says the posting, "maybe even Dave will be chatting."

I check the Dave Marcis postings on the bulletin board and find that although Marcis is not among the NASCAR point leaders, he has quite a following among Prodigy members. There are at least 40 notes posted.

One member congratulates Prodigy for sponsoring Marcis's car. Another wants to know how Marcis got started in racing. A third asks why such an experienced veteran can't get a full-time sponsor.

There's even what appears to be a fashion question: tell us, Dave, it says, how come you wear street shoes instead of racing shoes?

Too bad Dave's not around to clear up the mystery. Not one of the notes has drawn a reply from Marcis or from anyone who claims to represent him. I'm starting to wonder if this guy really exists.

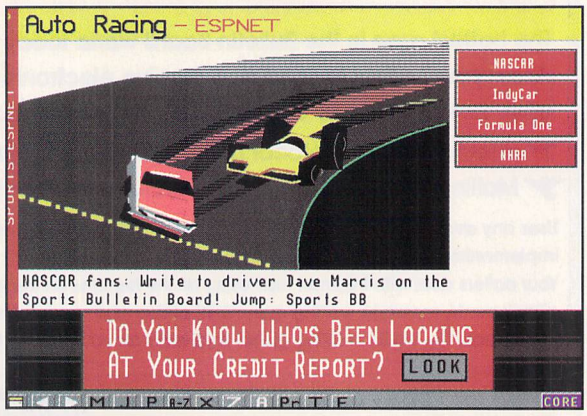
4:30 — I make one last check of the chat room. Maybe the race is over and Marcis finally has time to get to a keyboard. But no luck. The room is empty. Even the fantasy football fans have left.

"You must have just missed me," said Brian Simons, Prodigy's manager for special events.

Simons was Prodigy's man in the pits, the guy who was supposed to post the inside color from the race and maybe pass along a few questions from fans. Simons said he conducted a pre-race chat at about 11:30 using a laptop computer and a cellular modem. But Simons said the track was on the fringes of the local cellular network and when the race started and cellphone traffic picked up, he got knocked off the air.

"We retreated to twisted-pair cover," Simons said. He said he reappeared to chat late in the race from a land-line connection in the press room and checked in later from his hotel and from the Detroit airport.

Dwayne Leik, who works with Marcis, said that Marcis was never actually going to do keyboard chats from his car. The chatting was to be handled by Simons who was set up to



Racing with Prodigy

monitor Marcis's radio conversations with his crew and pass along the tidbits. Leik said Marcis could take a live question or two passed along by the pit crew if he was, say, running under a caution flag.

Simons was able to pick up some good inside stuff listening to the radio conversations. For example, Marcis knew two laps before he quit the race that he was going to have to quit. Simons heard Marcis tell his pit chief when his engine lost oil pressure. Had Simons been live in Chat, he could passed that news along well before TV viewers saw Marcis head for the sidelines. Marcis finished 36th in a field of 41.

As for the questions posted to Marcis in the bulletin board section, Leik and Simons were still working on them four days after the Michigan race. Simons said the Marcis team travels so much that it's difficult to find time for Prodigy.

"They do have Prodigy and they do have a computer," Simons said, but he acknowledged that "we'll have to do a lot of his typing" for Marcis. Leik said Marcis still plans to make live appearances in Prodigy Chat before the five other races in which Prodigy will be an associated sponsor of Marcis's car.

But Leik said he wasn't sure that Marcis himself will ever actually sit down at a keyboard. When you get down to it, he said, "we're probably the last racing team you would expect to be affiliated with an online service."

NETGUIDE COMING TO PRODIGY

NetGuide, the hot-selling book that tries to be the TV Guide for cyberspace, will soon have a home on Prodigy.

CMP Publications Inc., the book's publisher, plans to produce NetGuide magazine this fall. Later in the year, some of the material from the magazine will appear on Prodigy.

The NetGuide book contains short profiles and access information about features on commercial online services, bulletin boards and the Internet. CMP says NetGuide magazine will also include reviews of online services plus schedules of events, hardware and software reviews and profiles of online celebrities.

WHAT'S NEW

The Milwaukee Journal and Milwaukee Sentinel are the latest newspapers to announce plans to create an interactive product on Prodigy. Journal/Sentinel said it plans to market the service to all of Wisconsin and the Upper Peninsula of Michigan. The service will include news, a database of past articles, graphics, photos, sound clips and classified ads. The unnamed service will charge an additional fee, but the price hasn't been set, nor has a start-up date.

Just as Prodigy hooked up with ESPN to put a brand name on its sports services, the network's financial reports will soon carry the logo of CNBC, the cable business network. Prodigy says it will soon begin carrying special CNBC features, including transcripts from the broadcast programs and interactive chats with guests on CNBC programs.

Victims of IBM downsizing will be able to schmooze about their former employer on Prodigy. The Big Blue Alumni International Forum is designed to let former IBM employees talk about claims and benefits, make business contacts and keep in touch with old friends. The forum will also have lots of news reports about Big Blue.

Macintosh users, who often complain that they are not well served on Prodigy are getting both new interface software and a new connection with a Mac publication. The new software was bundled inside a special Macworld edition of MacHome Journal and the magazine announced a new partnership with Prodigy. MacHome Journal will post back issues of the magazine on the network and its editors will manage bulletin board and conference areas for Mac users.

CBS is offering video clips for downloading to promote the network's lineup of new fall programs. It's a good promotional tool, but Prodigy should really work on finding some way to compress the .AVI files. A snippet of an interview with Suzanne Pleshette that CBS posted recently took 25 minutes to download and had a running time of about 15 seconds.

AMERICA'S BABBLING

What would it be like if we took everyone who calls talk radio shows — and maybe the Oprah-Geraldo-Sally-Phil audiences as well — and locked them in a room where they would have to talk to each other.

In a way, that's what Prodigy is doing with its connection to America's Talking, a new cable channel for incurable prattlers.

The cable channel airs non-stop talk shows about politics, health, personal relationships and other weighty issues of the day. In addition to taking phone calls from viewers, America's Talking also keeps an open line to Prodigy where people can post their comments and questions.

In addition to offering comments to the cable shows, their hosts and guests, Prodigy members can also talk among themselves in the America's Talking bulletin board.

The BB sections are organized to match the channel's shows and topics. Among the topic areas offering postings are:

- O.J. Trial
- Health insurance
- Clinton's 2nd term
- Haiti
- Rwanda
- Crime bill
- Woodstock
- Sex in the 90s

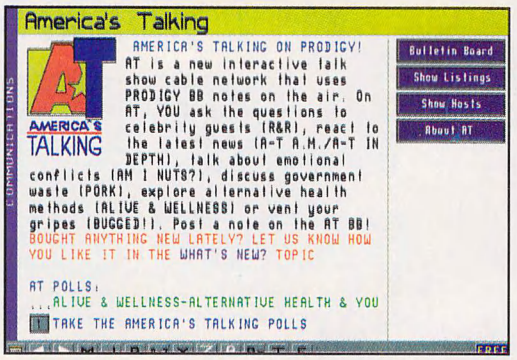
One subject that caught my eye on a recent browsing tour was called Am I Nuts?, which appeared to deal with a variety of mental conditions. Subjects included Smoking, Phobias, Pot and Lunatics.

What are people saying? Well, not much. Most of the sections had only one or two postings, often a query from the show's producer asking "What do you think about . . . ?"

But the Lunatics section did contain an extended exchange involving four Prodigy members. Here, then is a transcript of what America has to say when America's Talking:

RW (who typed in upper case): Has anybody noticed that this forum has become a lunatic's forum. There are whoa vampires, sexual diviants, werewolves, these people are lost! I hope prodigy turns their names over to mental health. There are a lot of screwed up people out there. I mean it (out there). It's no wonder the society is going to shred's. Do you want your children to be initiated by these sick minds? This is morbid.

DM (also in caps): If it's so morbid then don't read it!!! It's thinking like yours that gets these people into such crisis in the first place.
MF: Shut the hell up!!!! You sound like a lunatic.
RW: I stand by my statement.
MF: And I stand by mine.
JR: Get a life and choose one away from things that bother you so terribly. Also, seek professional help.
DM: Bite me.
MF: Go Girl!!!
DM: Really?
MF: I forgot what we were talking about.
BP: Good question. I'm lost too.
DM: I don't know. I thought we were talking about uh insanity or something.



America's Talking Cable Channel on Prodigy

Don't get the idea that all the conversation on America's Talking is so inane. Some of it is worse. Here's a note posted under the topic ME, BEEFCAKE FILL:

I saw something that was funny. It was like a cool thing. I like to see funny things, as long as it isn't like jello . . . I saw a teddy bear explode.

But my favorite posting came from a man who seemed to be soliciting dream analysis:

I once had a dream that I saw a man I knew several years ago the next day I learned that he had died a year eariler. That afternoon, I passed away. ◆

TOP TEN REASONS

"Why I missed *ONE BBSCON'94* "

10. Got lost on the Information Superhighway.
9. Large exhibit booths frighten me.
8. Had to wash my (your choice).
7. Thought everyone was kidding when they said Atlanta.
6. Was driving through Memphis, saw Elvis wearing a white sequined glove, turned around and went home.
5. Didn't want to miss the series finale of *STAR TREK: The next generation.*
4. What's a ONE BBSCON?
3. Three words: GUI's, GUI's, GUI's.
2. My Mom wouldn't let me go by myself.
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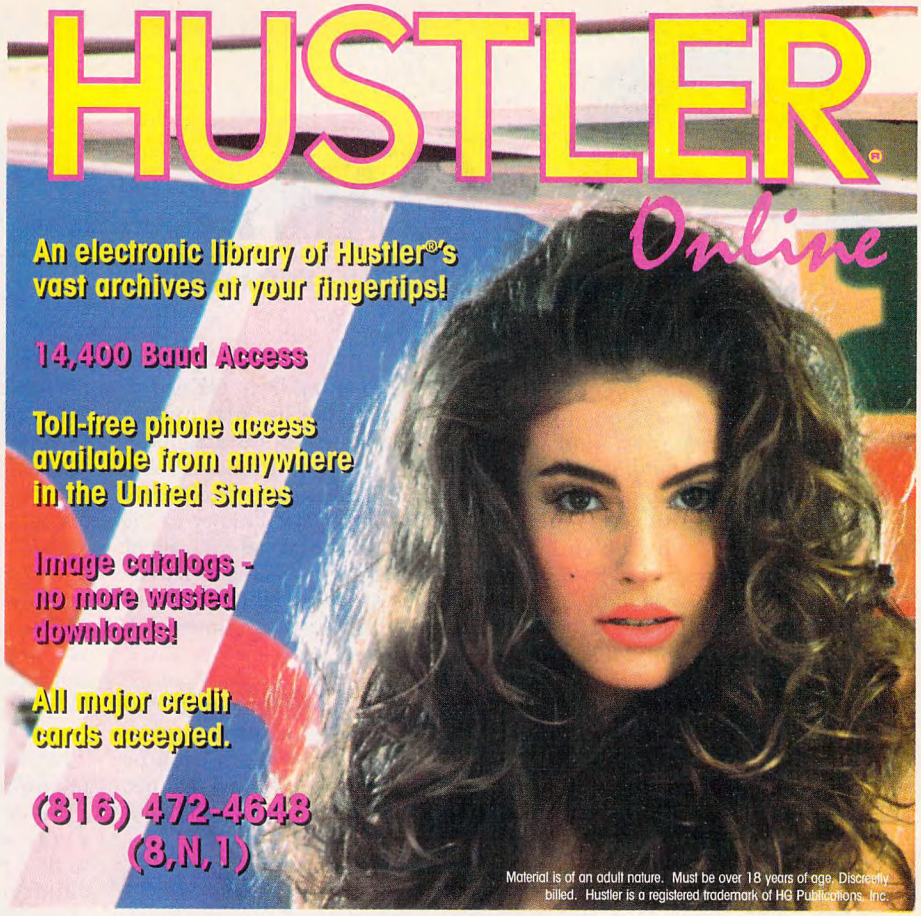

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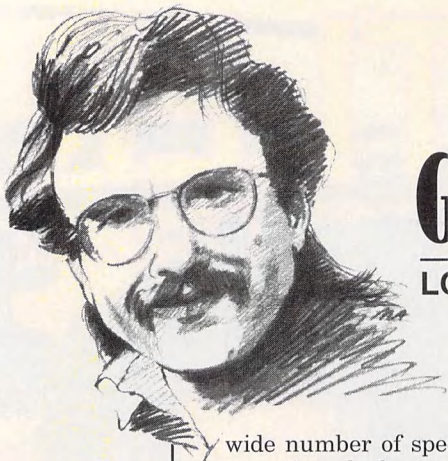


GENIE by Lenny Bailes

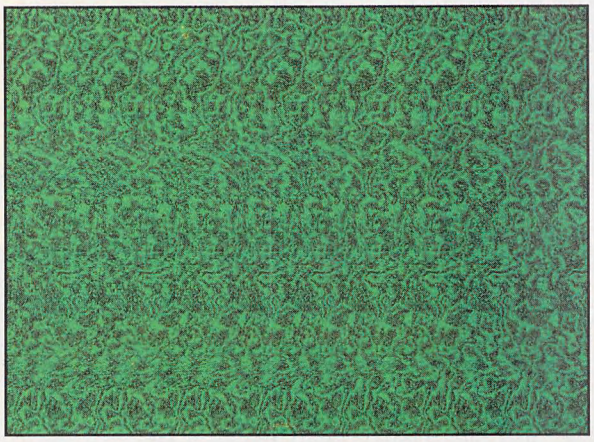
LOOKING INTO GENIE

Lenny Bailes is a PC consultant, writer and teacher living in the San Francisco Bay Area. He is a contributing editor for Microtimes, a California computing magazine, and co-author of Byte's DOS Programmer's Cookbook.

This month at GEnie is graphics month over a wide number of special interest roundtables and computing platforms. The Archives Photo Library offers a collection of over 20,000,000 pictures covering all subjects and periods of history from antiquity to the 20th century. The most popular libraries, as you might expect are the extensive collections of male and female movie stars. (These images are copyrighted and are available only for non-commercial home use unless you arrange a licensing agreement.)

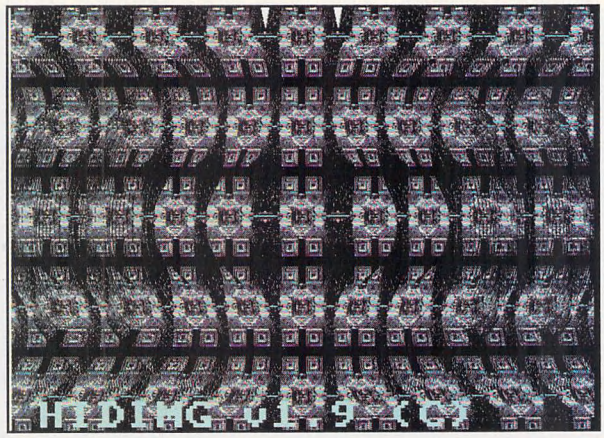
The Photo & Video Roundtable (Page 660) now offers a free scanning service for GEnie users, with the proviso that the photographs submitted to them may be included in their bitmap library. Photos can be scanned in JPEG, PICT2 or GIF formats, and you can add your own copyright notices to your images.

I've been a PC graphics maven since the days of CGA and Monochrome cards — scrambling to translate left-over scraps from the Macintosh and Amiga environments into the DOS world. But I was surprised by the level of expertise offered to GEnie subscribers by the sysops and resident gurus on no less than five hardware platforms. In addition to popular shareware utilities for viewing GIF, TIFF and Windows Bitmaps, this month's LiveWire Magazine contains pointers to a plethora of conversion programs, bitmap editing tools, and new sources on GEnie for clip art and photographs. The WordPerfect RoundTable library, by itself, has over 600 volumes of clip art. Graphic Converter (Graphiconverter1.79.CPT in the Mac RT library at Page 605) imports and exports files in PICT, Startup Screen, MacPaint, TIFF, RIFF, PICS, 8BIM, 8BPS, JPEG and JFIF Macintosh formats as well as DOS formats: PCX, BMP, GEM-IMG, and AutoDesk FLI/FLC. In addition to a series of familiar DOS viewers, the IBM and Multi-Media RTs now include VIDVUE, a combination bitmap viewer and multimedia player. The OS/2 RT (Page 1400) has HW/Paint, which reads and converts between Windows and OS/2 bitmap formats. The AMIGA and ATARI ST forums (Page 555 and Page 475) have new utilities that convert the more exotic IFF and Degas formats back to GIF, TIFF, and PCX. The Amiga Starship RT features a special gallery (Page 555, Library 44) of 3-D animations by artist Zak Jarvis. These can also be played on Macs and PCs once you download the appropriate shareware. (For PCs, running Windows, you need VIDVUE24.ZIP and AAPLAY.ZIP, a series of AutoCad FLI/FLC players located in the MultiMedia RT library.)



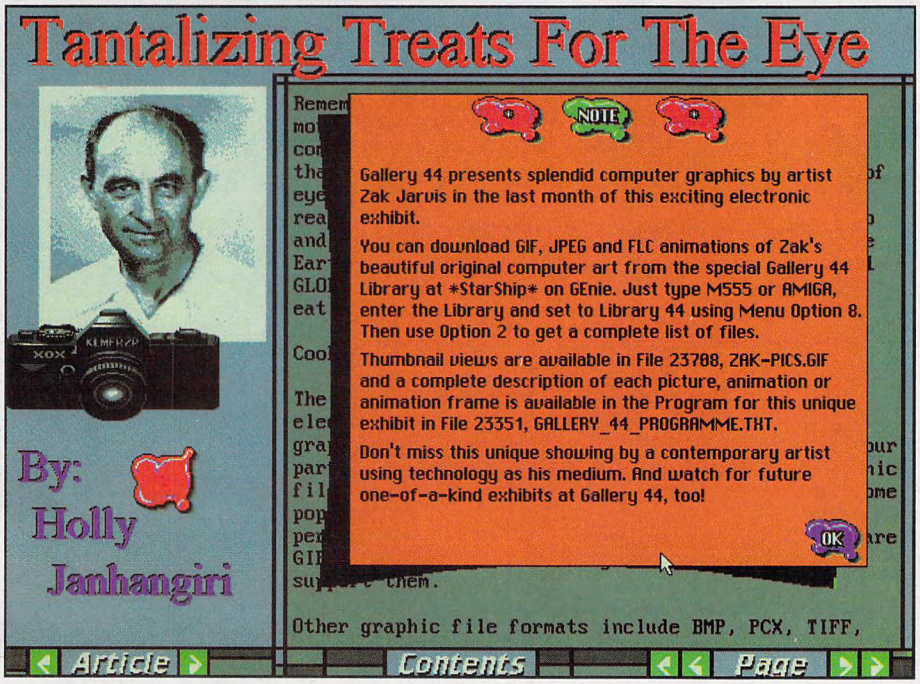
Do You See a Teapot?

The Apple II RT (Page 645) has a series of new programs that convert photos and clip art in Mac and PC formats to 8-bit or 16-bit files for Apple II/IIGS. If you're about to ask "Well, who in the world would want to do that?" it's obvious that you've never tried to help children do desktop publishing with the materials provided in public school systems. Utilities in the A2 file library can convert GIF and other formats into files compatible with Printshop and Children's Writing and Publishing.



Giant Doughnut Somewhere Within

But what really fascinated me amidst all the hoopla for GEnie's spotlight on graphics is a batch of programs that produce 3-D stereograms. If you look closely at two of the screenshots floating around this column, you'll eventually notice that the simple repetitive patterns contain 3-D embedded images. The green pattern contains a jade teapot, and the one that looks like a Persian rug is actually an overview of a giant doughnut. In order to experience the 3-D effect and see the hidden pictures, you have to relax your eyes and allow the image on the page to double slightly. (Some people get this effect by placing an index finger in their line of



GEnie ups ante in graphics game

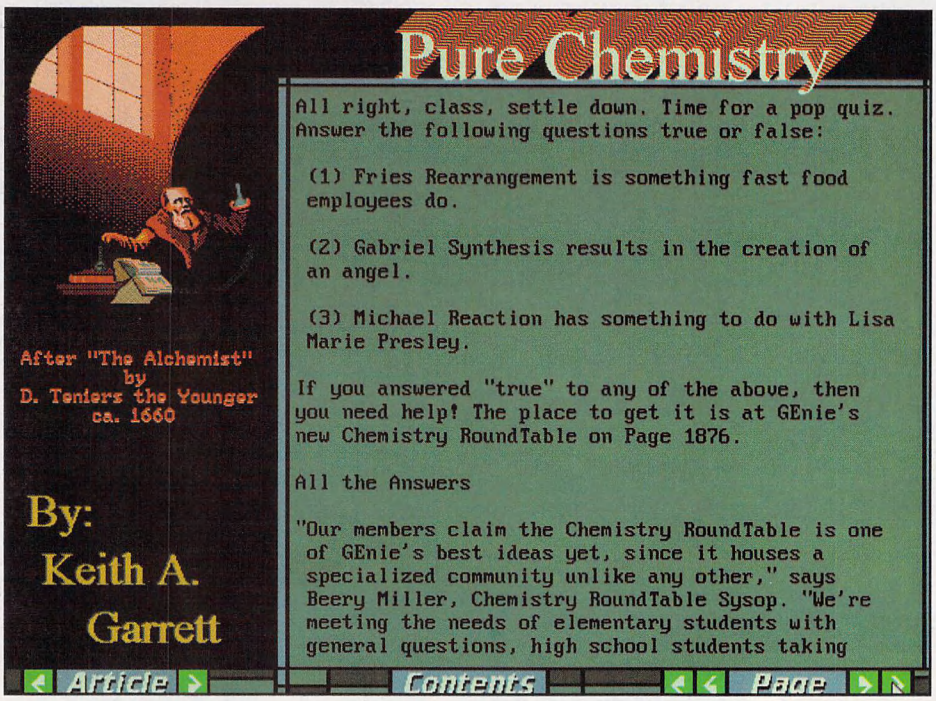
vision, focusing on the finger and then deliberately staring past it to something in the background. If you focus past the 3-D stereograms the same way you do with your finger, you should eventually get the holographic effect. The GEnie Graphics RT library (Page 1415) has a couple of DOS utilities that allow you to convert ordinary Windows Bitmaps or GIF files into stereograms. (Look for HIDIMG.ZIP, RD30.ZIP and RDSDRAW.ZIP).

Live RT Conferences

The experience of event conferencing with personal computers is slowly but surely evolving into a surrogate for radio and tv coverage of popular events. We mentioned last month that the Well had a tent set up at Woodstock II, allowing all the yuppies who stayed home and watched the concert on Pay Per View to exchange messages with the concert participants who were out there rolling in the mud. This month GEnie made its presence felt at Canada's Kumbaya Festival. Kumbaya, a concert event designed to raise money for victims of AIDS featured Bruce Cockburn, Randy Bachman and an assemblage of other Canadian rock and roll stars. GEnie representatives appeared on live radio coverage of the concert, and a live RTC was set up to allow GEnie users to talk to the performers. This kind of thing looks like its becoming a trendy new way to participate in events that you're too lazy to attend personally. The Science Fiction and Fantasy RT offered its first "live coverage" of the annual Hugo awards ceremony held at the World Science Fiction Convention. Instead of struggling with a rubber-chicken banquet, and spending a fortune on plane fares, GEnie science fiction fans and pros got to kibbitz with one another online and learn who won the awards simultaneously with the convention attendees. While the people at the actual ceremony were constrained to be silent during a number of "tribute" speeches and preliminary events, the SFRT participants swapped lawyer and editor jokes while we second-guessed and rooted for our favorite nominees.

GEnie's Law RT featured a conference with Mike Godwin, this month. Godwin, an increasingly popular speaker and legal rep for the Electronic Frontier Foundation, fielded questions and delivered comments on electronic privacy issues, Clipper, and "local preference" rules employed by zealot prosecutors to go after sysops located in more permissive zones of the country. The Space and Science RT featured a conference with David Levy, the co-discoverer of the Shoemaker-Levy comet which recently pulverized itself in a collision with Jupiter. The Chemistry RT (Page 1876) featured two conferences in August dealing with forensics and law enforcement. There are a series of new files in the library, including an enhanced periodic table of the elements and a couple of molecular modeling programs (look for Chemical.zip and Molgen.exe in the Chem RT library).

The number of graphical multimedia newsletters available in GEnie's various forums is increasing. In addition to LiveWire, and GEnie Lamp for DOS, Windows, Macintosh, Amiga and Apple IIGS, the Music RT (Page 135) features Hi-Tech Home, an electronic magazine full of movie reviews, reviews of CDs and features on television and the video industry. The Space and Science RT has just released the first issue of Science Fare, which contains summaries of recent astronomical and geographical news from all over the globe. (Check out the screen-shot of the erupting volcano inside of Chile's Mount Llaima.) ◆



GEnie's highly recommended Chemistry RT

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- Standard Windows-format .ICO icon utilization throughout (icon imports and iconbuttons)
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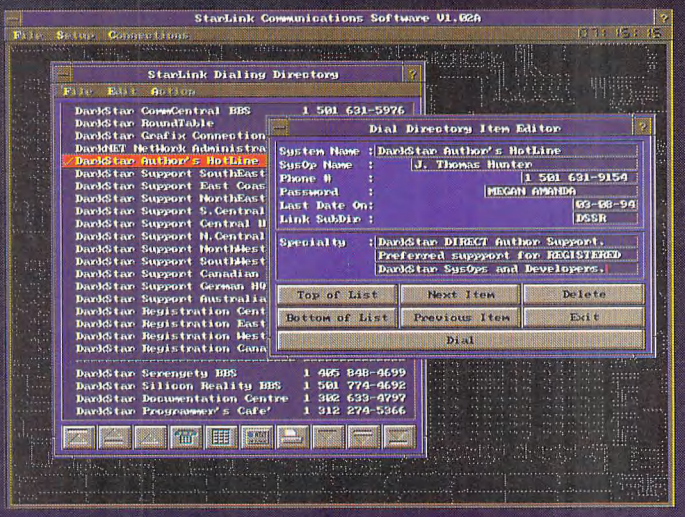
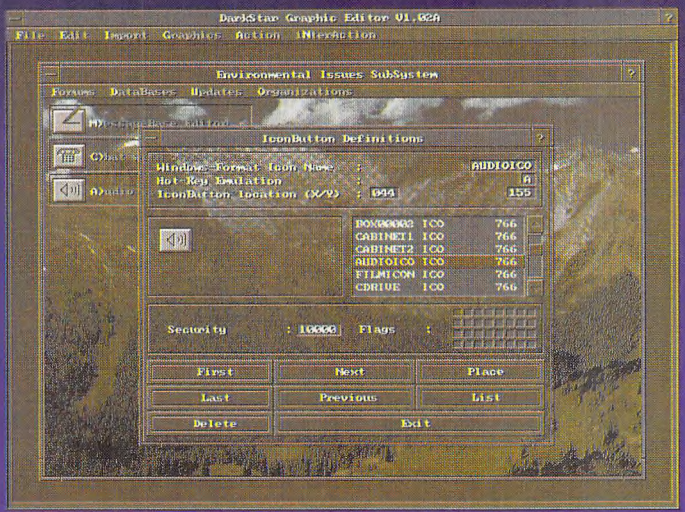
Sample Custom DataBase under the DarkStar Graphic Editor



StarLink terminal dialing directory database.



Sample menu under construction in the DarkStar graphic editor,with iconbutton import facility overlaid.

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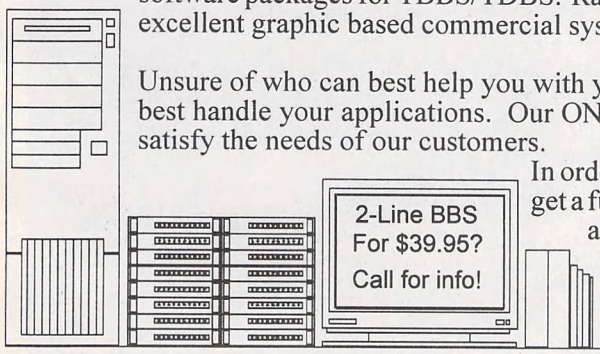

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BY CHARLES J. MOORE

MUSTANG'S UPPER HAND

The other day I was handed a "Federal Express" letter pack that looked like it was more than a little overstuffed. It had the look of a cardboard throw pillow with about a half a pound of duct tape holding it together. The badly beaten label had the unmistakable horse head logo of the Mustang Software Company and I knew right away that Jim Harrer was sending me some promotional freebie to check out and review. My first thought was to maybe run it under water or have it X-rayed but Jim is a pretty good guy so I tore it open with very little hesitation.

You ever see one of those foam rubber hands that the fans at a football game put over their real hand to indicate that their team is number one? This sucker was jammed into this little Federal Express letter pack like Annie Wison in Spandex. Hey Jim, what's the deal? You're a software company. This is a computer mag forgive me if I do not see the correlation here. As I sorted through my thoughts as to why anyone would pay good bucks for an extruded foam finger my imagination began to create images of Mr. Harrer using it to point out things on a white board at one of his many road show presentations. Boy, I bet people really take that kind of thing pretty serious. "Nice presentation Mr. H., but maybe if you lose the big rubber hand we could see the chart a little better." Maybe I am supposed to use this thing for making giant shadow puppets on the wall. Well I tried that and about all I could come up with (and keep in mind, I am pretty creative) was a profile of Richard Nixon wearing a ski mask, and that was a stretch. I have called Jim many times since I have received this overstuffed package and his secretary insists that he is "on the road, giving lessons on starting your own BBS in Tonga"...RIGHT.

Well, I do not give up as easy as most, so I decided that I would carry on and write this sucker up and actually find some sort of use for it. At this point in my life I am starting to wonder if maybe there should be something a little more important that I should be doing with my time. At 42 years old there has got to be something bigger than the evaluation of a foam rubber finger.

The first thing that comes to mind is the practical use of such an object. Well, I discovered that you can reach things on the top shelf pretty well with this thing on your hand. Reach is about it though, I do not think that it was just my lack of motor skills or hand eye coordination, but actually grabbing anything seemed to have its limits. If you need some way to knock everything you own down from the upper shelves then this would do it. If, on the other hand, no pun intended, you are entertaining the thought of maybe handling some spare Nuclear waste or detonating devices around the house, my best advice is no, don't think so. The agility test was not passed in favor of this "gift" from Mr.H.

One strong point did I did actually notice is that it has a pretty good attention getting factor. I discovered this quite by accident. While taking a walk in my own neighborhood, and of course wearing the hand, I began to notice that all the people on my block were looking at something on the ground. I myself, started looking in the same direction but did not have a clue as to what everyone was gawkin' at. Then it hit me, as I walked by with this big finger on my hand it was pointing groundward and everyone thought that I was pointing at something on the ground that was of interest. Now granted, this in itself is no biggie, but think about the possibilities, I began to point at the sky and my theory was proven correct, all my neighbors started to look upward. Hey, this is some kind of power. Without saying a word my ever pointing, yellow ,foam finger started to act as if it was possessed by some demon as it started to point at everything within eyeshot. It was great, I had half the block out in the street looking for things in the sky, on the ground and anywhere else that I pointed. At this point I should explain the demographics on my block. Most of the people that live there are not real quick to catch on to things. For some reason it seems that fate has thrust me into the midst of a group of people that find late night "infomercials" to be entertainment. In fact, if you listen real close you can hear the constant dial tones emitting from the recorded electro-encephalagram that each are issued by law in this part of the country.

A Collective Dial Tone

After a couple of hours of this kind of "block fun" I went back to the safety of my home and looked out the window in passing to see how much longer these folks would stand around talking to each other and trying figure what I was pointing at and where it went. It's that dial tone thing.

Not too bad as an attention getter but even that will begin to lose its appeal after a couple hours, so there has got to be some use for this thing that is, at least a little more practical. My mind started to think in all directions at the same time. Maybe as a teaching aid for proctology school? or how about sign language for traffic jams (yeah, I know, wrong finger, but it's just a shot in the dark) or maybe a prop for a real bad slight of hand trick for a real stupid audience, "hey he made the chipmunk disappear" or maybe I just spend too much time thinking that it is supposed to "do" something or have a function of some kind and the whole thing is not meant to be more than just what it is. O.K. Jim I'll cop to it, I spent a lot of my time trying to find some use for it but it all comes down to one thing Bud, Ya gave me the finger..BIG TIME. So you can come back from your "road trip" now. In closing I would like to add one more thing. Maybe Jim Harrer would like to make sure that everyone has the chance to enjoy having one of these things around the house (he is a giving soul) and I am sure that if you contact him with a request he would be more than happy to respond with one for you.

Welcome back Mr. H

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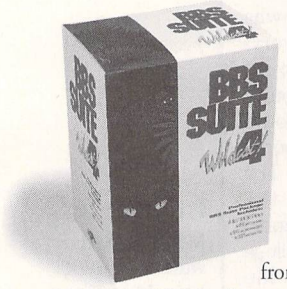

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A sophisticated messaging gateway, wcGATE, enables your callers to send and receive Internet E-Mail and news right from your BBS without having to know a single Internet command. Built-in support for satellite connections means your staff can have a constant flow of Internet information at their fingertips. wcGATE also allows you to transfer BBS messages to your company's favorite MHS compatible E-Mail package. Outside salespeople and remote offices can leave messages on the BBS and have them directed to the appropriate mail box on your LAN using Novell's Message Handling Service (MHS).

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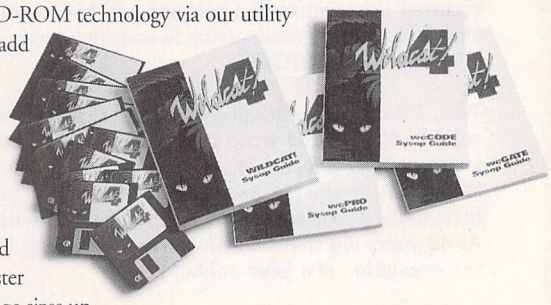

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DIRECT DIAL

A FAMILY AFFAIR

by Brian Gallagher

He remembers the night well. It was January 23, 1984 the weather in Mahway, New Jersey was typical for the time of year. After snowing earlier that day, a light rain fell towards the evening turning the streets to a sheet of ice by nightfall. Blair Schwanewede was following his girlfriend home, just a five minute drive. His 1975 Chevy Impala lumbered up a hill and went spinning out of control when he hit a patch of ice. In an instant his whole world was altered, striking a light post Schwanewede broke his neck and was paralyzed from the neck down. Fortunately, just hours after the accident feeling and motion began to return to his arms, not so, however, for his legs.

Despite a doctor's initial assertion that he would be paralyzed for life and likely die before his mother, he persisted in starting his life anew. Just weeks after the accident, he moved to North Miami where his mother lived and started attending therapy and rehabilitation programs. Over nine years later, April of 1993, he had another surgery on his spinal chord by a Boston specialist, and now, for the first time in nearly a decade he has some feeling in his legs once again After this second surgery he moved to Houston to undergo another round of rehabilitation and therapy, but he's not complaining, he has found something to keep his mind occupied - something to help take his mind off the pain that often flares through his body.

While in Florida he again took up a hobby he had grown to love as a kid, monitoring police scanners. It was this hobby that first introduced him to BBSs. While reading "World Wide Scanner Report," a publication covering police scanners, he ran across an advertisement that listed a BBS telephone number as a source for additional frequencies. A year earlier his mother gave him her old computer, a 286 with 2400 baud modem, since she purchased one of many rebuilt computers at bargain prices after hurricane Andrew ravaged southern Florida in the summer of 1992.

Although he was admittedly hard-headed when his mother first tried to get him into computers, he wanted those frequency numbers, and since he did have a machine and modem, in August of 1993 he called his first BBS. What he found was much more than just the frequencies he was looking for - he found a whole world. The world he found was based on Mustang's Wildcat! BBS platform, and he found it so attractive that when he did set up his own system a short four months later, it was destined to be a Wildcat! board as well.

In October of 1993 he purchased a 486/33, a 14.4Kbps modem and Mustang's Widlcat! software, thanks in part to money his aunt sent him for his birthday on September 6th. After two months of tinkering and learning everything he could about bulletin boards and computers, Schwanewede opened the Anything Goes BBS **(713)661-0917**, with one line on December 1, 1993.

Blair Schwanewede and Houston Sysops that carry SySopNet

He found some of the earlier days of getting his system going troublesome, but thanks to sysops like Nina Irwin, of the Info-Quest BBS, **(713)320-9163**, he made it through and was already running three lines by March of 1994. Just when it seemed that everything was running smoothly - his mother-board crashed and burned. Between his mother, who is a likely candidate for sainthood as she helped him purchase a new Pentium/60 motherboard, and BBSers in the area contributing parts and sometimes whole machines to get him up and running again - he was back online in just two days.

Today he has four machines connected via a Lantastic network with 16 CD ROMs. Now that he has been sysoping for almost a year, Schwanewede, practically an expert, is helping out hundreds of new sysops everyday through SySopNet, a network he began to assist Wildcat! sysops in times of need.

SySopNet, only two months old, is already carried on BBSs from coast to coast. The network carries over 40 different conferences where sysops can find tips and tricks on Wildcat! 4.0, QModem Pro, OLX - Mustang's mail reader, operating the BBS software with Novell and Lantastic networks, Desqview and Digiboard applications, and even programs written in WC Code, Mustang's own programming language specific to Wildcat! 4.0.

Schwanewede finds the majority of the questions on SySopNet are focused towards the set-up and installation of Wildcat! v.4.0, or about the Wildmail door, specifically, how to turn on and off echoes for conferences. As to Wildcat! v.4.0, he finds the program to be "a lot better," than the older version with an increase in speed being the best new bonus next to the flexibility afforded by WC code. "I used to get 300 messages per minute running version 3.91," he said, "with 4.0, I'm getting up to 3,000."

- ANYTHING GOES BBS
- HERP-NET
- ODYSSEY ONLINE
- LONE STAR LIST

One thing he misses about the new version is Cateye, a monitoring program for sysops to track callers' travels while on their system. Thanks to Wildcat Monitor and Control System, (**$49** for up to 10 nodes, **$79** for up to 100 nodes, and **$129** for unlimited nodes) a shareware program produced by Thomas Kristensen, of Blackwolfe Information Systems in Denver, **(303)759-5542** voice; **(303)759-2956** BBS, he can still track caller activities, upgrade their access, reboot a node if necessary, and he'll know if say a door gets hung along with a slew of other functions - "it's really nice," he said.

Some systems carrying the fledgling SySopNet network are: Mark Foley's JAFO! BBS, **(618)797-1675**, of Granite City, IL; Lonnie Engelhardt's Outlaw's Place BBS, **(916)922-9015** of Sacramento, CA; Lee Taylor's The Resting Place, **(815)786-9519**, of Sandwich, IL; Jim Weinschrott's Riverside Software BBS, **(503)471-0037**, of Grants Pass, OR; and Kevin Erickson's CyberDeck Systems, **(716)865-4339**, of Rochester, NY.

Anything Goes currently has over 1600 users, 70 of which are subscribers who pay for adult access - donations are accepted from others. There are over 400 conferences on the BBS including 100 from FidoNet, and while adult .gifs remain the most popular out of the 12 gigabytes of files on the system, the 800 DOOM files and several shareware programs also remain in the limelight. He is the Houston area network coordinator for DoorNet, (distributing door games), so it is not surprising to find over 60 door games on Anything Goes, with USURPER, The Pit, and Bordello being the most popular. However, the title "Anything Goes," is more of a misnomer since he and co-sysop, David Marcos, very carefully screen all uploaded files for piracy.

These days, Schwanewede spends all of his waking hours either working on his BBS, helping others with online difficulties, working on SySopNet, or in therapy. A nice thing Schwanewede has found about the Internet is his Boston doctor has an e-mail address which he checks and responds to twice a day. Planning to attend college to pursue a degree in programming, something he wouldn't even have considered only a year ago, Schwanewede is one individual who doesn't fold no matter what the cards say.

The Anything Goes BBS, attn: Blair Schwanewede, 5731 Gulfton Drive, Apt. 2725, Houston, TX 77081; **(713)661-8165** voice; **(713)661-0917** 14.4Kbps BBS; **(713)661-4677** BBS; **(713)661-7833** BBS - his data lines will not roll-over.

HERP NET

by Brian Gallagher

From salamanders to rattlesnakes, bullfrogs to Gila monsters, tarantulas to iguanas, if you have a yearning for knowledge or wish to possess things that slither, slime and crawl, forget the pet store - call Mark Miller's 10 line, TBBS based Santronics Virtual Community, **(215)464-3562**, better known as the Reptile BBS, and the home of Herp Net, an electronic haven for all things slimy and scaly.

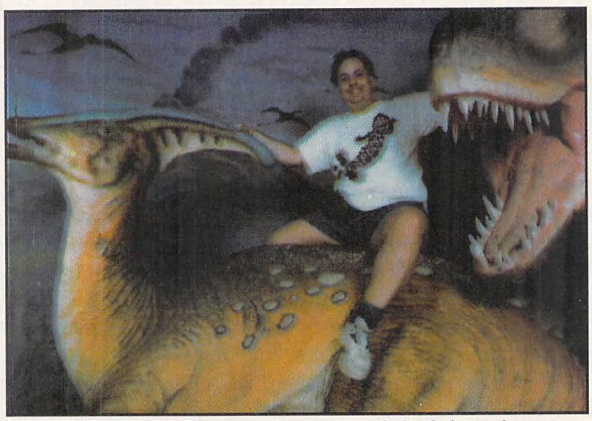
Few pet shop owners peddling puppy dogs and gold fish are more qualified on the subject of Herpetology, than Miller. (Herpetology is the study of reptiles: land dwelling forms with scales, i.e. snakes, lizards and turtles; and amphibians: water dwelling forms with skin, i.e. frogs, toads and salamanders.) First taking an interest in this underworld when he was just a child, his hobby hatched to where he is now President of the Philadelphia Herpetological Society, (his second year in that position), a herpetological consultant to zoos, industry and the government, the founder of CompuServe's pets forum and section leader of the service's reptile area for the last five years. He has written several articles on the subject, his board contains the largest herpetological file collection known, and he has the largest collection of books related to the field, with over 6,000 titles - some dating back to the 15th century.

In addition to his technical expertise in the herpetology field, Miller also has lots of hands-on experience when dealing with the sometimes deadly creatures. His house guests include: 2 adult corn snakes and 18 babies, 12 painted turtles, 2 red-eared sliders (also turtles), 6 box turtles (his favorite), an adult pair of Australian bearded dragons - very popular in the pet trade right now, an adult pair of boa constrictors, and an adult pair of African clawed frogs - the only creepy crawlies that actually live in the BBS room of his home.

The only pet that has a name in his four-legged and no-legged community is "Brutus," a Belgium Shepherd. He said he doesn't ever name any of his reptilian and amphibian friends because they don't answer when called anyway. But he has a hint for those who do choose to name their scaly pets, for those who strive for originality, steer clear of "Iggy" for an iguana, he said there must be 400,000 of those in the states alone.

Miller first found his way into cyberspace while in high school. One of his favorite pastimes was sneaking over to Drexel University's computer room and playing a Star Trek game utilizing their main frame and teletype. After his father's company upgraded to a 300 baud modem in the late '70s, Miller found himself armed with a 50 baud modem which he hooked up to an Altair 8088. At the time the biggest obstacle he faced was finding someone else with another modem to connect to.

Thanks to a newsletter from an Altair user group, Miller stumbled across Ward Christensen, a man who he now refers to as a "great pioneer" in the bulletin board industry. Christensen's online experiments yielded what is today the BBS industry but, at the time, Miller and the handful of enthusiasts connecting to his system weren't quite sure what he had created. There was some discussion over what to call connecting computers together through modems he recalled, and several names were bantered around before it was decided the system was really more like the bulletin board in a grocery store and that name was adopted.



Mark Miller at home with friends

Miller's BBS first went online in April of 1983 and was, to his knowledge, the 13th BBS operating in the country at the time - many thanks to Christensen for putting his X-modem protocol in the public domain - a move Miller adds, that not only promoted the industry but was likely worth millions of dollars to Christensen had he decided to charge for it.

Today this reptile BBS runs on a 486/66 with two nanny machines handling file processing and other duties. Every Tuesday morning one of the nanny machines calls the atomic clock at the Bethesda Naval Station and updates the system's clock to keep it as timely as ever. The machines are connected

through serial ports and run eight 2400 baud and two 14.4Kbps modems.

There are no adult files, save a very sexy snake in the buff, no doors and no games on the system - the major draw for his 2,000 off and on users concern herpetological issues. Scanning through the message base in the Herp Net area of the system one finds good snake hunting areas across the nation; those wishing to purchase and sell various exotic animals and a virtual dating service as this message notes: "Mark, I would like to adopt another unwanted iguana. It would have to be a large one to keep with my four foot female. She is lonely and has stopped eating. If you know of anyone giving one away I'll take it. It can even be a mean Iguana. Thanks."

By far the majority of the messages on this system involve sick reptiles or amphibians and cures for their ailments or care for their newborns, like this one concerning a slew of baby basilisk (lizard) eggs recently brought from Central America, "After 65 days in a jar with sand, today we are hatching babies. This is obviously new to me...can anyone suggest a diet of such as pin heads, meal worms, guppies, blood worms???? Help!"

Other attractions include a book search service for out-of-print and rare titles in zoology or natural history; book reviews and announcements of new titles; a calendar of international meetings, conferences and other events; a database of herpetological organizations and societies; and a file archive area filled with text files with information on everything relating to the field from venomous snakes, to box turtles in Britan, tortoises in Turkey, the natural history of fire-belly newts and Iguana care. The file, TANKMIND.ZIP offers a fresh and salt water aquarium management system and there is also a tropical fish reference guide, as well as a slew of .gifs.

The one thing you won't find here is the answer to a question that Miller fields about four times each and every month, like this one he recently received from Japan, "I think my boyfriend gave me Herpes, what should I do?" And some people think cybernauts are restricted to online encounters.

The Santronics Virtual Community and HerpNet, attn: Mark Miller, PO.Box 52261, Philadelphia, PA 19115-7261; **(215)464-3561** fax; **(215)464-3562** BBS; **(215)698-1905** 14.4Kbps BBS.

ODYSSEY ONLINE

by Brian Gallagher

Located 30 miles southeast of Los Angeles, Michael Allen's Odyssey, **(818) 358-6968**, of Monrovia California - already one of the biggest chat systems around, is gearing up to get even bigger.

At this time, with seven full time employees, the system has 134 incoming lines, with 32 local direct dial lines, (16 U.S.Robotics 14.4 kbps, and 16 Supra 2400 baud modems), a CompuServe X-25, a Pacific Bell X-25, and 800 service available through U.S. Tel - all told giving local access to over 850 cities nationwide.

With the recent installation of a T-1, the Odyssey crew is looking to have 210 lines by sometime this fall; and yes, you can telnet to Odyssey: **odyssey.ody.com**. The system runs on a proprietary version of Galacticomm's Major BBS software. According to Allen, he needed something "a lot more powerful (than the commercial version of Major)...we re-wrote the breakthrough library to run at 32 bit, and re-wrote the code to run at 32 bit," giving the system the characteristics he was looking for.

The system runs on five 486/66s including a UNIX box, and two computers which serve as baby-sitters, which let the staff know if something goes wrong. The well renown board has been written up or mentioned in Boardwatch Magazine, TIME, The Canadian Press, Newsbytes, MicroTimes among others and has been featured on several television shows including Donahue, Good Morning America and A Closer Look.

Primarily an adult chat system, offering local and Internet Relay Chat, the system also carries three gigabytes of files, (including adult files), as more of a convenience than a major draw to the system. Next to chat - games, files and forums rate high among caller priorities, with Internet access accounting for about 10 percent of their overall business today - a number that is literally growing every week.

Other attractions are an online shopping mall offering 200,000 products, the Official Airline Guide and 4,700 newsgroups. The system takes 2,000 calls per day and has a 25 percent female audience, with no free access to anyone. The most popular subscription package is **$15** per month for full access including Internet and five hours of free network (X-25) time. For **$35** per month callers receive 15 hours of free network time; for **$65** per month callers receive 30 yours of free network time. After the free network time is used callers will be charged **$4.80** per hour.

Michael Allen (back row on the right) and Odyssey Crew

Allen began his sysoping days in August of 1988, just three months after getting his first PC. His motivation was a big phone bill from calling other boards. His first attempt at running a BBS, which he titled Computer Data Services, (not to be confused with the Computer Data Services BBS **(512)887-0787**, of Corpus Christi, Texas), was an attempt to match business borrowers with business lenders and ended in a dismal failure with basically no callers. By October of 1988, the system was practically dead except for the game players that frequented the system.

In November of 1988, Allen added chat to the system and things really started to take off. After going through several other name changes, including, The Other Ball, (named after a San Gabriel Valley strip-tease establishment), and Access L.A., (a name the board out-grew with the addition of X-25 packet networks), the name was changed to Odyssey in August of 1991.

When he isn't busy at a computer, Allen spends his spare time with his son Neil, racing sea-doo run about jet skis. Neil has a good shot at winning this year's national novice title and is sponsored by Odyssey Online.

Michael Allen, Odyssey Online, Computer Productions, 1307 South Shamrock, Monrovia, CA 91016; **(818)358-0936** voice; **(818)358-6968** BBS.

LONE STAR LIST

by Brian Gallagher

From the land where men still ride horses and "ya'll" and "howdy" are as common as oil derricks comes this month's list of BBSs. In typical Texas fashion this list is BIG, comprised of 448 systems central to the Houston area's 713 area code, (approximately one bulletin board for every 8,000 people), it takes David Wachenschwanz, sysop of the six line TBBS based Atomic Cafe, **(713)530-8875**, and assistant Charles Wharton (who came on the Houston BBS scene when there were only 10 systems in the area), the better part of the last week of every month to be sure that every BBS on the list is up and running.

Updating this sizable and volatile list is no easy task. This month alone there are 70 systems asking to be added to the list, with likely as many dropping off. Wachenschwanz attributes the turnover to people becoming infatuated with the idea of setting up a BBS and once they realize the amount of work it takes to really be a sysop deciding they really don't want to run a BBS after all. Work is something that follows this list like strumming a dusty guitar follows a camp fire.

Judy Scheltema, the original list keeper, moved on to greener pastures and left the list duties to Ron Crowther, sysop of the now defunct Houston In Line. Crowther ran herd over the list for several years before turning the reins of this bronco chore to Wachenschwanz in October 1991 - after "pulling all of his hair out," Wachenschwanz said. Out of the 150 calls (a conservative estimate) the board takes daily, a full 25 percent are there looking for the renown list.

The list is free to everybody, callers don't even have to open an account on the Atomic Cafe to download it; by using "BBS" for their first name, and "list" for their last name, callers will be quickly routed through several screens and prompted to download the list. Thanks to Dwight Silverman, the computer columnist for the Houston Chronicle, the list is available in some 15 different dialing directory formats.

Using the shareware program FONDIR v5.9, Silverman outputs the list in Procomm Plus for DOS and Windows, Telix, QModem, and Boyan dialing directory formats among others. Silverman generally does this extra bit of work anonymously just because "He gets a big kick out of doing (it)," Wachenschwanz said.

When Wachenschwanz started keeping the list he also opted to produce an online magazine titled "Connect! Magazine" of which he is the editor and Wharton is a columnist, not to be confused with "Connect Magazine" (no exclamation point), a hard copy online publication. Connect!, available on the Atomic Cafe, offers a local view of area bulletin boards and other modeming information often in a tongue in cheek fashion.

Dave Wachenschwanz-Sysop of Atomic Cafe BBS

A television broadcast engineer for 15 years, Wachenschwanz quit his full-time position working for television last September and now makes his living largely from the online world. Between running his board, selling hardware and software (he is a reseller of eSoft's TBBS), installing BBS systems and working free-lance for television when say Barbara Walters or David Hartman is in town - or just when he feels like it, he has found life working for himself rewarding.

Currently taking in an average of $120 in subscriptions per day, he said even his wife, Shelia, can't believe how much money is coming in. He attributes the recent "quadrupling" in subscriptions to the addition of the PIMP option module, (Personal Internet Mail Processor), giving users access to Internet e-mail and newsgroups. He also notes that he is experiencing a migration of users, at least one a week, from the major online services defecting to his system since he added Internet capabilities. While he says he isn't going to get rich anytime soon from his BBS, it does pay the bills, "and then some."

Purchasing a computer in the late 1980s because he just had to have one, Wachenschwanz was an unlikely candidate for a sysop. The reason is he had an extreme aversion to modems, figuring they were nasty pieces of equipment that only opened up ways for viruses to creep into his system and really cause problems. This being the case, he isn't really sure why he did buy that first 2400 baud modem, perhaps he says, it was just to fill up the slot in his machine. Whatever, after calling Crowther's Houston In Line, Wachenschwanz was hooked.

By December of 1989 Wachenschwanz opened up the Atomic Cafe with one line, originally with the focus of Atomic related matters. He chose TBBS because, after navigating several other platforms, he found TBBS based boards to be the easiest and most intuitive for menu navigation from a user's standpoint. When Phil Becker and eSoft came out with version 2.2 in November 1991, he upgraded and added another line.

In January of 1993, he turned the system commercial and added another four lines, bringing the total to six, but the real turning point occurred when he attended the 1993 ONE BBSCON show in Colorado Springs. After returning from the convention in August, he said, "I was full of fire," - apparently so, by September of 1993 he had quit his job and was a self employed sysop.

Today the BBS runs on a 386/33 connected to a Lantastic network with two other machines. One of the other machines does nanny work for the system's two six changer CD ROMs, and the other is used for developmental work. Being stingy about adding additional lines until they are absolutely needed, with all lines busy about 25 percent of the time during peak 6:00 pm to 10:00 pm hours, Wachenschwanz is in the process of adding another line hooked to a US Robotics V.Everything modem.

While the original focus of the board was to be nuclear related matters, it has matured to where it is now a general board with files and Internet taking precedence for most caller priorities. There is also a TBBS support area for all eSoft registered sysops which remains popular among that select crowd.

Subscriptions are **$10** per month, **$25** for 6 months, or **$45** per year for full access with two hours per day online time. In addition, he has NightBird rates at **$8** per month, **$15** for 6 months, or **$30** per year for full access with 3 hours per day online time - the only stipulation for NightBird subscriptions is they call between the hours of midnight and 6:00 am, with the sole exception of their e-mail, which they can call in for and read at any time.

The Atomic Cafe, David Wachenschwanz, P.O.Box 720894, Houston, Texas 77072; **(713)530- 8875** BBS; **(713)530-2709** voice; **(713)530-5644** fax.◆

448 — AREA CODE 713

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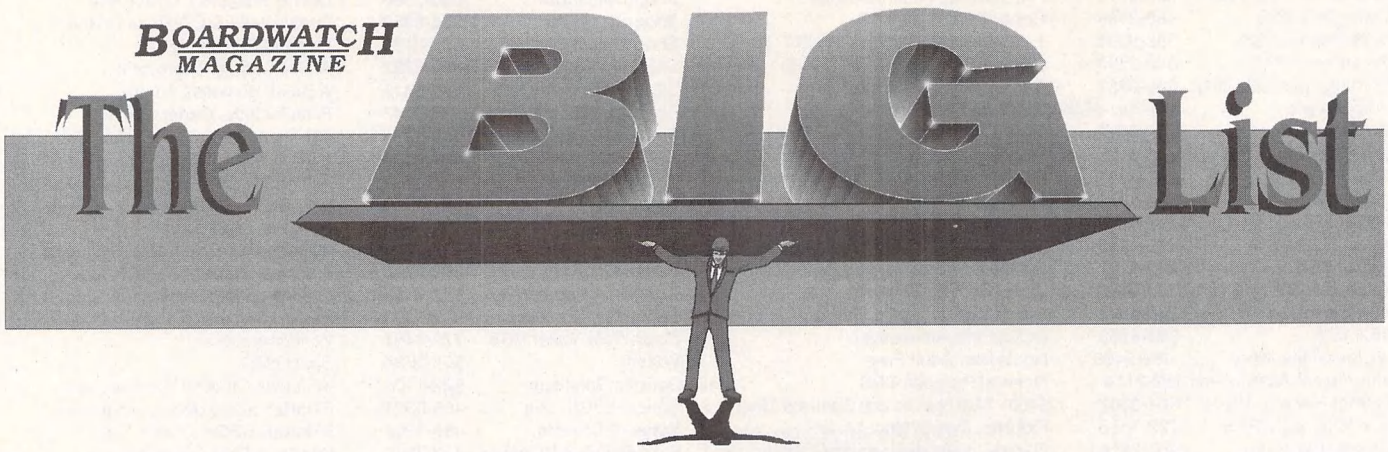
BULLETIN BOARD SYSTEMS

001-Science Fiction	778-0239	Science Fiction Topics
8UP BBS, The	713-424-2739	Games, Files, Files
10-Forward	444-4535	StarTrek, Games
1701D USS Enterprise	466-0778	MODs;GIFs;Action Figures
A-Mega BBS	488-6077	8 Plus Gigs of Online Files!!!
A No B.S. BBS	998-8430	CD-Rom, Wildnet! FREE ACCESS!
A Shot In The Dark	864-9553	Worst BBS in Houston VGA Planet
A Womyn's Line BBS	647-9057	Alternate Lifestyle for Womyn
Aardvark Park	664-7799	Fido, files, fun!!
Abacus BBS	398-0949	Home Education On The Internet
Abend BBS	771-2802	A General BBS
Abinitio's	957-1413	Games,CdRom,messages,All ages
Abstract Realities II	998-2337	VGA Graphics Online
Access BBS	838-1445	Files, Confs, Adult Section
ACiD RAiN	347-6131	File-Msg-Usrp/Lord/Pit/Bre REG
After Hours Night Club	277-6106	Adults Only! Live chat! GIFS
Aladdin's Castle BBS	445-6967	Files, door games
Alcatraz RBBS-PC	450-3870	Fido & Paul Revere Net, RBBS hlp
Alluvium Mist	451-3989	CandyNet, SGANet, CD-ROM
Alluvian Tattletale	476-9224	Doors Messages Files CD-Rom
Alvin BBS	331-0317	Files and door games; Email
Amoeba Chant BBS,The	367-6595	1.2 Gig, Doors, Stereograms, prgms
Anchor, The	688-9162	Atari ST BBS
Angel's BBS	475-1622	A little something for everyone
An Ice Cube In Hell!	937-8010	Messages, files, hardware
ANIMAL BBS, The	941-8299	Windows GUI environment Bi/Xfers
Anything Goes! BBS	661-0917	16 CDS Online,Adult Areas
Apparitions Appear	491-0467	1.7 gigs, games, adult access, Fido
Archives BBS	896-1721	E-mail made easy! RIP Graphix
Armadillo Ranch	550-7918	Adults Only! - 21 and over
Armchair Athlete,The	457-0444	Sports, Fantasy Leagues, 28.8kbps
Atari-OH	480-9310	Atari System
ATAS Computing	837-8003	Circuitnet, Fido, BRE, IP
Atomic Cafe, The	530-8875	Connect! Magazine/BBS Headquarters
Attic Light BBS	488-7779	Tradewars/BRE/SRE/L.O.R.D.
Aztec Gold	367-0155	Games, chat
B4-U-BUY	975-2424	FREE - Sourcing Databases
Back To BASIC	471-9112	BASIC Programing, 3.5GB, Free
B A R D's Tavern, The	729-7938	Adult, shareware, games, hardware
Bay Area Connections	471-3846	Messages, Doors, Free Access
Bayou Bend BBS	894-0574	Fido, CD ROM, Genealogy, All Ages
Bears Den BBS, The	550-9243	Fido, PrideNet, Internet, Adult
Beginner's RBBS	666-0035	New BBS User Help
Beholder's Lab!	333-8318	Role-Playing and Paranormia
BHA & Associates BBS	320-0197	General interest, Novell
Bill's Little BBS	835-3400	Ham Radio BBS With CD ROM
Bit Bucket, The	496-9670	Over 100 FidoNet conferences!
BitBucket ST	729-7555	General Purpose BBS
Bits and Pieces	537-0702	Multi-Node, 1.2Gigs, Gifs, PD & SW
Black Box	480-2686	v.32bis, FTP, InterNet, games, news
Black Gold	437-1101	Files, Games, Message, Fido, CDrom
Black Moon	926-7848	Messages & online games!
Blue Ribbon, The	463-8656	BRE, Pit, TW, SRE (registered)
Bob's File Exchange	293-7215	Tech files & Utilities for hardware
Boundless Mallorea BBS	481-8422	Games, Messages, Fun
Brain Storm Learning	550-8105	OnLine Education SAT, GRE, ACT
Brewers' Witch, The	272-7350	Pagan Issues, Internet
Brigadoon	409-321-4637	(Conroe) Fido, Paul Revere Nets, Games
Britannia	587-1935	Focus on games of all sorts!
Bulldozer's BBS	242-6370	10+ gigs online, Multi-Line
Byte Busters	852-4541	BBS Chess - Home base
Byte Me BBS	975-0502	v.42; Files; Games; Mods; Gif's
Byte Source BBS, The	495-1161	v.42bis; Games, GIFs, Graphics
CCI BBS, The	331-0860	Engineering/Linux/Internet FAQs
C.E.R.N	558-5342	UFOs, paranormal
C.Y.A. BBS, The	879-6013	Houston's OS/2 Info source!
Cadillac John's BBS	939-0709	100+ Fido, TexNet, NO FILES!
Call of the Wild	453-2405	9600-28800 only, files, messages
Canadian Connection	699-1010	Files, Messages, Info, Fun
Castle of Dreams,The	781-3875	Fantastic Adventures Await You
Cats Lair BBS, The	837-9614	A full dynamic BBS
CD Caddy	888-0172	3 CD-ROMS online, 11,000+files
Chairman of the BORED	947-1456	True Windows BBS
Chat Link Houston BBS	837-8200	Adult-oriented, 21 & Over
Chatterbox BBS	597-3500	Social, Chat, 32 lines
Christian Chat BBS	451-8406	100% Christian; FidoNet
City Lights	455-1492	Messages, Files, Ham, CDROM
City of the Ancients	664-6824	RPG Headquarters of Houston
CityScope BBS	477-6424	4-Line chat, GIFS, Products, msgs
Classi-Ads	409-441-9417	(Conroe) Fido, CD-ROM
Cliff Lee Consulting	347-3187	Ray Tracing and Graphics
Club Amiga BBS	528-7511	Amiga User's Group HQ, Echos
Coast Colony BBS	776-3226	We're looking for area artists!
Cobra BBS	996-8762	Games, Echos, Files
Coco Loco	923-6809	English/Spanish Bilingual
Com Port	437-0483	BBS Chess
COMM Port One	980-9671	FidoNet
Community Pride BBS	523-1350	Adult BBS: gay and lesbian
Computer Living -Fndtn	444-2927	Disability, ADA, ADAPT, friends
Compu-Sys Internationl	464-0786	Games, Msgs, Files, ADULT
Computer Buy/Sell	446-5194	Echomail, SmartNet
Computer Exchange	409-441-6879	(Conroe) Support BBS- Comp Exchange
Computer Post Mall	565-1498	Tech Info, Games, and Retail
Computer Room, The	713-420-5725	Toll Call; Games
Computer Scorephone	837-9006	Internet, Files, GIF's, Fido
Confusion Central	367-7391	Doors, Fido, chickens, & more
Connexions BBS	713-554-8114	Toll Call; Shareware, drivers, messages
Conservative BBS	579-8161	WildNet, UseNet
Conservative Hippi, The	331-8009	Fido Net-Registered Trade Wars
Corner Stone, The	344-0815	Christian Based BBS
Cowboy's	726-0385	Files, msgs, games
Coyotes Den	409-447-3198	(Conroe) HawkMail, Door Games, Files
Cross Town Connection	820-1136	Games, Message Base, Files
Crusader Software	530-5144	General BBS system
Crypt Keepers BBS	265-5948	Files Messages Games TW2002
CSI Online	409-321-3297	(Conroe) Fido, Msgs, Doors, Files
Cuddly Place, The	956-1374	Voting booth, files, friendly
Cutting Edge, The	466-1525	Usenet/Internet/Ilink/Intelec
Cyber Chat	682-5600	Multi-line Chat/Games/KYRANDIA
Cyber*Net	438-0229	TradeWars; a fun, tiny BBS
CyberShack 2000+	935-0978	16 lines @14.4k; 3.9 Gigs of Files
Cyborg BBS, The	641-3877	Games, Messages, ADULT Areas
Cyclone BBS!, The	398-3962	Many Files, Doors, and Messages
Danzig Platz BBS	444-3423	70+ File Bases/5000+ Files Online
Dark Dragon's Hideaway	433-3684	Online games
Dark Horse, The	550-2481	Internet E-mail, Newsgroups
Dark Star BBS	556-1044	Messages, Games, Files, Chat
Data Warp BBS	355-6107	Usenet, multi-network, 2.4 gigs
Database Connections	980-3234	dBase & Clipper help; FidoNet
Dead Parrots Society	437-8858	Activists, Radicals & Events
Debate Garden, The	556-9167	FidoNet-Internet-Debate System
Debate Place	451-6066	FidoNet
Deep Space Nine	713-251-5889	Toll Call; 30 megs files, 25+ doors!
Deer Park Connection	479-2184	FidoNet
Delta Board	358-2524	Adult Files, general Files
Desktop Overdrive	859-0513	Doors, E-mail, Networks
Destiny BBS	849-7490	Family Board, chat, games, files
Dickinson Night Light	337-1452	FidoNet

Digital Dreams	579-0580	TAG Alpha Support Fidonet
Digital Mall, The	338-9765	Digital Mall-Express Member Service
Digital Solutions	992-7347	General Purpose BBS
Digital Vortex, The	441-1635	Games, CD-ROM, Multi-Networks!
Dignity/Houston	499-4828	Doors, Files, CD-Rom, Msgs
Dimensional Shift	482-5848	Free Online CD-ROM, 3 nets
Dimensions of Eternity	466-0872	UseNet; 400+Mods; Classy Adult Gifs
Dimensions of Infinity	682-6609	Messages, Fidonet, Classy Adult Gifs
Disaster Recovery Net	888-0496	Online disaster recovery network
Divorced Dads BBS	783-3605	Non-custodial fathers issues
Doghouse PCBoard	837-1103	1.7 Gigs of files. Since 1986.
Dojo BBS, The	436-1795	Texas' First Bushido-BBS
Dooms Destiny	409-321-3158	(Conroe) Door games, HawkMail
Dos Lords Dungeon	681-1779	Files, Messages, Echomail
Double Bogey BBS	575-0397	Shareware & Adult sections
Dreamer's BBS	540-8166	A lot of fun!
Dream Zone BBS, The	941-0475	Lots of Renegade doors, CD ROM
Dungeon Of Erotica	713-554-5212	Toll Call; Chat, files, adult, games
Dynasty 2	856-8893	Files, messages, online games
Eat Flaming Death	447-1927	Wargame board
Electric Gridiron	856-8127	Sports Associated BBS
Electric Oracle	690-2851	Internet, Fido, games, 24k+ files
Electronic Oasis	439-1466	GUI environment; 5 CDs online, GIFS
Electronic Tax Filing	888-0139	Online Tax Filing & Shareware
Enchanted Forest,The	493-6018	Messages / Utilities / PCHelp
Enchanted Lair	429-7775	Messages - Files (no ratios)
End Adult BBS, The	363-1231	Adult, Games, Files
Equine Online	988-8411	Horse Topics, Internet & Usenet
Eternity, Inc	452-7008	Family / Christian / Mental Health
Eye of the World,The	894-0140	Files, Doors, Messages, Nets
EZ-Host BBS	280-8180	9600 MNP, 38400 v.42bis
Fairlane	489-4580	Friendly Fido-Net PR-NET Games
Fantasy Party Line BBS	596-7101	Adult,Parties,32lines
Fido Partner	458-7410	FidoNet
Fight Back BBS	774-4364	Fighting for true Americans
Final Approach	463-2960	Flynet, Fidonet - Aviation BBS
Fireside	496-6319	USR DS V.32bis/V.42bis FidoNet
Fish Bowl,The	894-6062	Shining Light in Darkness
Flight Center BBS,The	240-5097	Files, messages, computer part
Foreplay ONLINE	487-5885	Free adult access, chat, GIFs!
Fourth Planet	728-3775	General Purpose BBs
Freedom Base One	895-8812	Chat, Files, Adult
Freedom Base One	895-8814	14.4 Kbps modem line
!Freedom! RBBS	997-6633	Guns: Right to Keep and Bear Them!
Freelancin'	522-2629	General Purpose BBS
Fringe, The	996-6866	Files, messages, autoimmune support
Fulcrum's Edge	350-6284	FidoNet
G's BBS	586-7751	Support for GT (G's) Utilities
G Spot, The	932-7573	3 Gigs Adult/Shareware/9 Mail Nets
Galactic WarZone, The	498-4231	20 doors, adult area, Fido
Game Board, The	353-2706	35+ online games, Echomail, files
Game Palace, The	458-2085	Games, Adult, Kid's, Doors, Fun
Gangrene	484-1910	Messages, RPG's, Games, Files
Gas Station, The	947-1629	CD-Rom, Games, Adult, Fido, 1+gig
Gateway Houston	522-2629	Science Fiction / Fantasy games
Gavel, The	785-5877	ANSI Art, Chess, Legal, QWK
General,The	438-3156	5+ Gigs files/messages 14.4-21.6k
Genus BBS	870-0601	Graphics Toolkits Support/Info
Gold RBBS, The	662-0844	Files
Golden Coco BBS,The	941-1542	Fido 1:106/941 EchoMail, OS/9
Goldfinger's BBS	983-0604	10 message nets, cd-rom, 20+ doors
Goose's Nest	492-7929	28.8k Files, over 70+ Door games
Grasshopper Nest	980-0998	Doors, messages & files
Grimmy's Doghouse	494-7365	VGA ANSI, Files, Doors, Messages
Ground Zero BBS	722-0589	Doors, files
Grusome Graveyard,The	556-1014	Games, files, messages, T-Net
Guitar Board, The	442-1525	Houston's Guitarist Connection
Gunshop, The	472-6577	Guns/ammo Aviation, Adult photos
HAAUG Heaven	955-2626	Houston Area Apple Users Group
HACE BBS	458-9923	Houston Amiga Computer Enthusiasts
HAL-PC BBS	963-4100	Houston Area League PC Users Group
Hard Disc Cafe	589-2690	Adult CDROMS, Quick & Visual Basic
Harry's Asylum	471-6503	SIGs, Online games, voting, 85megs
Hawks Nest	409-445-3720	(Conroe) HawkMail, Internode Chat
Health Center, The	620-6834	Public/Personal Health Topics
Heavn BBS	996-5352	A little something for us all
HELIX	998-5600	Internet, MUDs, Chat
Hitchhiker's Guide,The	242-0504	2 lines; Intelec; PEN; Deep Echo
Hobo Haven	429-7862	60+ door games, files
Home Brew University	923-6418	Homebrewing and BEER information
Home Educators BBS	820-4743	Home Schooling / Christian / CDROM
Homo Sapiens Club,The	855-7289	Mental Health, Addiction etc.
Horde, The	469-9589	Files, doors, messages
Hot Pursuit BBS!	852-7060	Fido / PoliceNet / NLEMS / WildNet
Houston Alternative -Life	849-1048	Gay/Bi Adults Only over 18
House of Chat	448-4585	Chat, Files, CD-ROM, Doors, Email
Houston After Dark	849-1032	24 lines
Houston Catholic	837-8455	Candle, Reshet, Catholic Files
Houston Connection	523-4120	OS/9 system assistance
Houston Game Designer	955-8920	C/C++ GFX Code, Virtual reality
Houston Heights BBS	862-3950	Files, CD ROM, door games, messages
Houston Inline Preview	265-4000	Classifieds, Letters to Bill Clinton
Houston Libertarian	728-9777	Libertarian, privacy activism
Houston N/W Z-Node	937-8886	QWK mail door, files, Zcpr3 area
Houston Novalink	870-1017	Macintosh BBS, CD-ROM, doors, GUI
Houston Windows	996-7439	Windows ONLY files & messages; Fido
HOWL!!	862-1415	Life! Files! Words! Soul!
I.D.I. BBS	339-2273	General Purpose BBS
I.F.H.C.A	948-9906	Pipe, valve & fitting database
Ice Castle, The	722-5400	Chat lines / e-mail / cd databases
Ice Lair	694-1522	Houston's Hottest Chat House!!
Ice Palace, The	591-7939	FidoNet
Ideal Rampage, The	578-2177	5.6 Gigs On-Line, Files and Doom
Ikonoclast	721-1538	Games, philosophy
InfoQuest BBS	320-9163	Games, files, CD-rom, FidoNet
Inner Sphere	893-4919	OS/2 and Battletech Support
Insider, The	784-8823	Real Estate Assistance
Intercont'l Airways	661-7360	AutoDial String 661-7360,,77,77
Internet Source One	623-7920	At prompt:c ios <enter>
I/O Error	713-288-3744	Toll Call;OS/2 Support/files/msgs/MODs
Isis Online	924-4070	New age issues / doors / files / fun
JW's BBS	680-1296	Fidonet / CD Rom online
Jackson's BBS, The	849-4022	3 Gigs, Adult, Echos, T-Net
Jamwar BBS!	462-6629	User friendly, instant access
Jason's BBS	361-3169	Games, Adult Areas, GIF's
Jerks BBS, The	456-0401	Adult, Shareware,
Jim Dandy's BBS	476-9709	FidoNET / Online Games / Adult Files
Joe's Bar and Grill	674-4640	FidoNet
Jose Cuervo Clipper	787-9658	dBASE / Clipper users group
Joy House, The	458-9293	Adult / Love / Sex / S&SNets / Files
JunkYard, The	458-0552	General Purpose BBS
Keefer's Keep	484-3485	Nancon Team AD&D staff
Ken's Comics	355-8419	Houstons biggest comic BBS
Keyboard	409-321-1609	(Conroe) Files
King's Corner BBS, The	550-2661	CD-Rom, Circuit Net, LOD, TW2002
Knowledge Transfer	370-5804	Education, CBT, AI, Entrepreneurs
Komputers for Kids!	286-7800	Universal Law / Education / Wolves
Labyrinth	440-4869	Files, messages, stuff
Last Call	523-8366	2 lines; Alternate Lifestyle, FidoNet
Last Chance BBS	713-576-2795	Toll Call; PD & Lots of Gifs, CD-ROMs
Latino BBS	531-9980	1.5 Gigs / Fido / Bilingual / Games
Launch Pad	498-7996	FidoNet
Learning Curve BBS, The	933-3510	700 Megs, No Ratios, Free
Lee College BBS	713-425-6866	Toll Call; General BBS DOS/Novell Supt
Leisure World	859-0902	Fido, C-Link, AmiNet, ADS, SAN
Lifestyles BBS	331-5512	Alternative Lifestyles, chat
Lighthouse BBS, The	431-1825	NetMail, SIGEchos, Adult Areas
Linear Logic BBS	561-0702	Messages, tech, netmail, files
Linx	440-7364	General Purpose BBS
Livewire BBS	821-4749	FidoNet, CircuitNetZyxel 19.2
Lone*Star BBS, The	485-8127	Online tape, adult, gifs, JPG
Longhorn BBS	937-8636	Houston's First Outdoors BBS
Lost Boys BBS	975-7943	Alternative lifestyles
Lumin, Online	242-8741	Anti-Violence / General Interest
Macaw's Roost	495-1797	3 CDs Online, 3-plus gigabytes
MacCentral	644-3856	GUI interface CD-ROM online
MacEndeavour	640-1298	Mac messages, files; Fido, UseNet
MacLair	286-2540	Internet, OneNet, 2 gigs
Magicland BBS	432-0440	ANSI / Files / Messages / Doors
Mailbox, The	331-1753	General Purpose BBS
Main Line BBS	893-1541	CD-ROM, USR 28.8 Line, Doors
Mask Removed, The	947-3062	Doors, messages, files
Matchmaker	480-4466	36 lines
Matrix Family BBS	575-0818	5000 files No Ratio!
Maximum Overdrive	470-9165	760 Megs, Adult, Games, Gifs, Msgs
Media Bank	748-2420	General Purpose BBS
Media One Studios	953-2600	Texas' Largest BBS! 50 Lines
Mel's	896-1545	Genealogy; Shareware; Religious
Merlin's Keep	342-8968	RPG's, Doors, Files
Michael's Place	946-8606	Fido Echo / NetMail / Internet
Micon Co., The	947-8185	Fido 1:106/8185 EchoMail
Micro Archives	449-2775	CD-Roms, ASP BBS

Mike & the Boys' BBS	996-9776	File Transfer, Adult Sections
Mister Ed's BBS	580-8105	General Purpose BBS
Mont Belvieu BBS	385-2001	1.2 Gigabytes online USR HST
Moondance BBS	342-5590	Windows, Adult Games, Doors
Morning Train BBS,The	860-0751	Games, Files, Misc stuff
Motherboard	409-441-2939	(Conroe) Files, Internet
Mr. Ed's Corner	447-6119	V.32/V.42; Programming
Music Connection, The	240-0105	FidoNet
Musician's Guild	242-4927	Music, Sprites, Animation
MYBBS	364-8241	Science, Politics, Star Trek
My New BBS	726-0445	Zoom 12,000 Turbo
My Lil' Corner	575-1470	Online games, messages, files
N.H.C. BBS	443-5782	Education / Star Trek / Info
New Ware Club	558-9420	Virus; Games; Windows
New Zalem	360-3594	Anime, games, rpg's, msg's
NEXUS 6	398-9363	DOOM Players Heaven
Nocturnal Madness	499-5468	No Ratios, Adult Files
Non-Violent Alternatives	452-2114	General Purpose BBS
Normal Place II, The	861-0007	2400 - 14.4kbps On-Line Games & More
NovelConcepts BBS	729-7555	FidoNet, Doors, Now 14.4k
Nuclear Exposure	463-2854	Games, messages, matchmaker!
Nuts and Bytes BBS	997-9867	Doors, Files, GTPN, FIDO
Optical Delusions	772-2209	Latest files / adult areas
Out of the Fog BBS	777-7842	12 Step messages, chat, games, & fun
Pachyderm PWR	464-7429	Rush, files, games, echo's, police
Pale Rider	434-8308	Files / Games / New Users Welcome!
Paradise Play Line	597-1090	World Wide Link, Romance & love
Parliament	443-6632	Adults ONLY!
Paul T's Place	941-6112	Mail, files, games, local chat
Pegasus II	337-5349	Adult areas, Two CD-Roms, 2 Gigs
Penguins On Parade	787-9077	Music & Writing, Fidonet
Pentecostal BBS, The	641-3058	Christian, 1.50 Gig's
Perry's BBS	466-5349	Adults ONLY - Files - Messages
Phantasia BBS	457-6669	SciFi / Fantasy / Anime / RIME / SFNET
Phone Booth BBS, The	820-2223	Adult Games And Conference
Phunny Pharm, The	474-5420	Megamail, Medical, Aviation
PIC of the MID Town	961-5817	OS/2, CP/M, Adult Access, FIDO
Pink Triangle BBS,The	777-9562	Gay / Lesbian, MSG Bases, Files
Pit Road	568-0814	Door games, files, subs, e-mail
Platinum RBBS, The	667-4215	USR DS; Validation Required
Playline Magazine BBS	568-4400	Adult dating, sexual areas
Pleasure Dome	497-7731	Message bases, files, doorgames
Possum Belly BBS	587-2368	Files, Star Trek, Fun for All
Power House BBS, The	852-7028	Christian support; games
Power Plus BBS	550-9944	On-line computer store
Prime Concepts BBS	937-4872	Comic / Cards - Tech Support
Programmers Attic,The	894-4429	Programming: all languages
Programmers' Palace	242-4708	Programming files & Fido
Project X	356-7368	Dedicated to files - free service
PSL Online	442-6704	Public (Software) Library online
Psychodrome BBS	488-6817	HUFON - VGA Planets - Hack - Solves
Quick Draw BBS	448-2853	General Purpose BBS
R/C Connection, The	339-1277	Games / Mail / Files
Ragnarok	621-8252	1.7Gb / CD / Adult / Msg's / Mac files
RAM-Rock BBS	662-0060	Adult Files and Entertainment
Rangers F.U.B.A.R. BBS	992-3860	9600+ only, files
Really Big Board, The	784-6073	FidoNet, EFF, LOD, LORD, Usurper Free
Recovery Room I	242-9674	Addiction / 12 Step recovery
Remote Control, The	324-3931	Files - Games - Messages - Fidonet
Revolution! BBS,The	329-5115	Right to Keep and Bear Arms
Ringworld	681-6634	Roller & Inline Skating Information
Right-Wing	479-3404	For all Conservatives
Rivan Warrior	324-3302	Multi-net, RPG's
Roach Coach OS/2,The	343-0942	USR DS V.32terbo, FidoNet, OS/2 Net
Road Kill Cafe,The	370-7004	Adult 17 and up, SRE, BRE, HM, GW
Rocnrol BBS	496-7415	Adult, Windows, Games, Programing
Room Under the Stairs	597-9167	Files, Games, Messages
Roost, The	482-7080	Guns, survival, SDN, FidoNet
Round Table, The	922-1393	BBS for eclectics, GC, MENSA
RSS-BBS Support Cnter	859-8253	Support For Ramsoft
S.N.A.F.U	482-2292	Online games: Tw2002, BRE-SRE, PIT
Sands ProBoard	961-1604	General Purpose BBS
Sag's Sack BBS	343-0091	On-Line Games & Message Bases
Satellite TV Board	623-4899	Sat TV Info - RIME Houston Hub
Second Chance BBS	482-9328	Survivor / Recovery Support
Set Free! BBS	324-4421	Christian Ministry Outreach
Shadows Of Nights	354-6406	Files, Fidonet, Podnet and Doors
Shark Waters	890-0025	31 doors
Shelly's Web	523-3446	Files, Games and Messages
Sherwood Forest BBS	879-6073	Tons of message areas, 8+ Nets
Shit	521-4624	Programming board from Hell
Shop-Net Online!	530-7365	Online Shopping, Cyber-Ads
Shop-Stop, The	558-8989	Great Deals & CD-ROM Online
Short Circuit	495-8156	General Purpose BBS
Silent Mobius BBS	872-3752	Anime / adult / shareware
SilverCorp	261-5418	A Small Business Forum
Slug Trail	479-8043	Files for kids, General, Adult
Small Town Spitfire	359-1393	CD-Rom: 2.6gigs; RIP; New Users
Snake Pit	466-3022	USR DS; FidoNet Echos; Files; GIFS
Software Expressions	530-1599	ASP, Files, Online games, SDN HUB
Solace BBS	337-1053	Play D&D! Its On-Line!
Solar Realm, The	855-1665	Home of SR-Games!
Solutions	438-1219	Investment / Real Estate / Watkins
Sound Off [FX]	392-7286	6 Nodes, Planet Connect Hub
Southern Outpost,The	997-7138	On-line games, messages, files
Southwest Crossing	933-9303	Potpourri of areas / information
SouthWest Tower BBS	772-8461	Windows only
Spasm	568-3534	SpasticNet
Specific Solutions	522-1104	Windows CICA CDRom archive
Squeak! BBS, The	485-0321	FidoNet, some doors, programs
Stage of Dreams	488-3264	FidoNet; RPGs; Doors; Files
Stained Glass Windows	445-3963	Windows Files / Free Access
Star Base I	961-0744	600MB+ Files, Msgs & Games & more!
Star Crusier's Flites	455-2409	Files
Starshine	998-2282	Files, CD Rom
St.Lawrence BBS 486	530-0717	Higher access time & download limit
Strike Force	643-6143	Games & Adult GIF'S Shareware
Super Collider	973-8034	Games, gifs, wavs, mods, jokes, fun
Synergy BBS	558-2040	A free computer flea market
Tales of the Crypt	713-251-1961	Toll Call; Doors Galore!
Talk Channel Houston	476-5196	Adult social/Chat 32 Lines
Terrapin Station, The	584-9877	2Gigs, adult, 4 networks, games
Texas Computer Sales	489-1051	Computer Sales, Tech Support
Texas Gold Mine	849-1090	Online games and files
Texas Online	660-7020	Adult Gifs galore
Texas Outpost, The	354-2975	Technical - CD - Networks
Texas Safety Assoc	265-7872	Business and Personal Safety
Tomz Toyz	462-5215	Adult CD-ROMS online
Toon-Town BBS II	332-0809	28.8kbps, Games, Fido, Files, CDROMS.
Total CAD System	721-7726	CAD and 3D computer graphics
Town Talk Houston	530-7600	HST, Chat, on line trivia
Track Hound, The	331-4106	Racing Greyhound Info / Fido
Traders BBS, The	991-3325	Buy / sell / trade / 6 CD Rom's
Tranquility Base	893-9124	Star Trek, BBS Chess, CD-ROM
Twisted Psyche	489-1154	Files, Messages, Doors
Uncle Wally's Place	493-2501	ASP BBS
Under Construction	931-0600	General Purpose BBS
Underground, The	589-6469	Adult, celebrity, files, doors
UnderWorld BBS	681-6166	Live RPG's, msgs, doors, files
Untamed Wilderness	480-8403	250+ Fido Confs., 18,000+ files
Up All-Nite BBS	477-3708	Adult, Game Files, Msgs.
Uptown Connection	713-259-0715	Toll Call; It's it, and that's that!
USS Pegasus	777-0821	USR V.FC / DS, ham, RPGs, CDRom
U.S.S. SEAQUEST	713-288-6440	Toll Call; Great Ansi, Games, Files,
Valley Soft BBS	893-2851	WWIVnet / FidoNet
Vanity Vanity Publishing	722-0934	"Not Just For Writers"
VeriTech	578-0308	FidoNet
VIS BBS	894-2069	Basic Programming
Wally World BBS	894-9633	Files, Messages, Adult Area
Walrus Street Journal	270-7372	CD Rom, Files and Doors. Free.
War Games BBS	489-0677	Games, GTPN Netmail
Warehouse, The	473-7623	Massive MODs, CD-ROM, D&D
WBBS	409-447-4267	(Conroe) Ham Radio, Fido / ITCNET
WCSCNet	568-6401	FidoNet
Wheel, The	341-5573	FidoNet
Windows Mania BBS	558-8707	Windows only
Windwraith BBS	872-8560	PwrNet, Msg Bases, 46Mg Xfer, OLG
Wings	852-3753	General Purpose BBS
Winners Circle BBS,The	473-9591	On-line games, files, messages
Wizard's Realm, The	946-7315	Message based BBS & fish / pet SIG
Wizards Workshop, The	992-2526	General Purpose BBS
Wooden Shoe, The	474-9657	Games / Files / Messages / Fido
X, The	728-2199	Libertarian activist base
Xciting Systems Online	943-4000	All adult
Yankee Clipper, The	975-1323	BRE, SRE, free and friendly
Ye Olde Bailey	520-1569	Usenet & Smartnet Hub
Ye Olde Inn III	331-3056	We ONLY Do Messages
ZacharyNet	933-7353	General Purpose BBS



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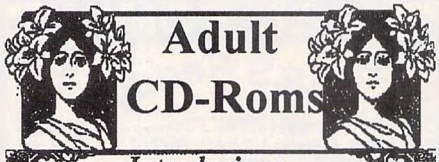
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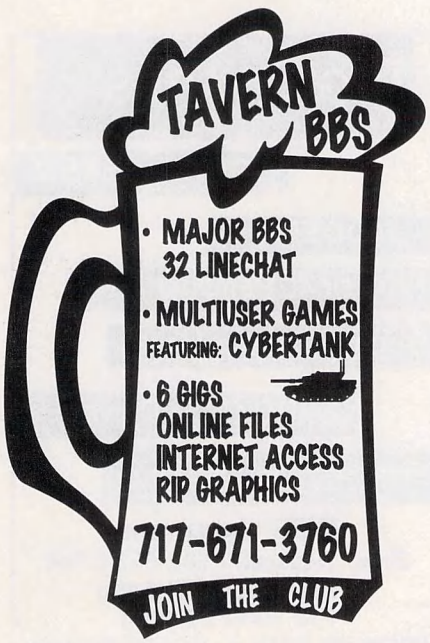

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POPULUS II (706)569-0773 Columbus, Georgia since 05/93. Sysop: David McAfee. Using MajorBBS 6.12 with 2 lines on MS-DOS with 600 MB storage. Twincom at 14400 bps. No fee. Windows, programmer's support, C++, object-oriented programming, flash games, online chat, CD-ROM's, programming available. Fido, local messaging, and pay service Internet.

Cyber-Zoo (708)215-1895 Buffalo Grove, Illinois since 09/94. Sysop: Rich Kellman. Using MajorBBS 6.21 with 2 lines on MS-DOS with 1000 MB storage. US Robotics at 28800 bps. No fee. Fun for everyone, Ripscript, MajorNet, NetAccess plus private forums, online games, 10 CD-ROMS thousands of files, adults only forums and much more. Give us a call and find out what you have been missing.

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The Outer Limits BBS (708)289-0034 Chicago, Illinois since 05/92. Sysop: Mistress Crystal. Using Syncronet 1 with 12 lines on MS-DOS with 3000 MB storage. Various at 14400 bps. $20 Quarterly fee. The Midwest's best D/s, B/D & fetish online play party. Fantasy handles, chat, games, conferences, contests, Adultnet, and 3GB of files make us the board to explore your fantasies and play. Women free, plus no-harassment policy. Visa/MC. 21+ only.

Caer Tuatha (708)393-7750 Warrenville, Illinois since 12/93. Sysop: Gwydion. Using MajorBBS 6.21 with 4 lines on MS-DOS with 120 MB storage. Cardinal at 2400 bps. $30 Hourly fee. Exploring the unknown; strange and unexplained phenomena, the mystical and the mythical. As your gateway to the unknown, Caer Tuatha invites you to take a peek into that fascinating world that lies just beyond the fringes of the imagination. Free trial.

Caer Tuatha (708)393-7750 Warrenville, Illinois since 12/93. Sysop: Gwydion. Using MajorBBS 6.21 with 2 lines on MS-DOS with 120 MB storage. Viva at 14400 bps. $7-30 Variable fee. Exploring the Unknown; Strange and Unexplained Phenomena, the Mystical and the Mythical; for Serious Research or just the curious. Local and National Forums, Files, Games and more. Come visit the "Gateway to the Unknown!" Free Trial Memberships.

MidWest BBS (708)513-1034 St. Charles, Illinois since 02/84. Sysop: Steve Mills. Using PCBoard 15.1 with 15 lines on MS-DOS with 7500 MB storage. Hayes at 28800 bps. $45 Annual fee. Call us last. We are confident you'll find us to be one of the best, friendliest, most enjoyable bulletin board systems that you have ever called. Call us for your free trial and get our BBS guide in the mail after you logon. You won't be dissapointed.

Liberty BBS (708)571-0015 Chicago, Illinois since 07/92. Sysop: David Salch. Using MajorBBS 6.21 with 183 lines on MS-DOS with 15360 MB storage. ZyXEL at 19200 bps. $25 Monthly fee. Local access from Chicago & California. Nationwide chatLink, WorldLink, MailLink, MajorNet, Internet & Usenet newsgroups. Use your modem to call 800-474-1818 for local & low cost SprintNet nationwide access info. Chat, games, news, & much, much more.

The Virtual Village (708)598-1606 Oak Lawn, Illinois since 08/94. Sysop: Stan Mocek. Using TBBS 2.2 with 4 lines on MS-DOS with 5000 MB storage. Microcom at 28800 bps. $39.95 Annual fee. We are new and expanding soon. USA Today, Newsbytes, PC Catalog, Fidonet. Adult chat and multiplayer games. Only the best in shareware, CD-ROMs online. Free trial period, unlimited d/l with subscriptions. M/C and Visa, immediate upgrade.

PitStar BBS (708)687-4413 Oak Forest, Illinois since 01/92. Sysop: Pady Smith. Using PCBoard 15.1 with 4 lines on MS-DOS with 2000 MB storage. Intel at 14400 bps. $25-90 Annual fee. Multi-purpose BBS with a business and finance flavor. Stock, commodities quotes, Usenet, Internet email, GIFs of missing children, current weather reports, 100+ file directories.

The Outer Edge (708)692-3487 Park Ridge, Illinois since 10/94. Sysop: Scott Teipe. Using MajorBBS 6.21 with 10 lines on MS-DOS with 2600 MB storage. Prac at 28800 bps. $0.45 Hourly fee. All ages entertainment system. Daily national chatlink, Internet access, MajorNET, NetACCESS, 4 cd-rom's online, numerous online games including the ability to play DOOM against other's online.

Cyber Investment BBS (708)717-0799 Naperville, Illinois since 01/94. Sysop: Robin Moseley. Using RoboBOARD 1.04 with 3 lines on MS-DOS with 1000 MB storage. AT&T at 14400 bps. $49.95 Annual fee. Online SVGA graphical interactive bar and candlestick market charts, investment info, futures data, & news for the investor. Chart: US/Canadian stocks, mutual funds, indexes, futures, and fut. options. Download FXTERM terminal program via zmodem.

COM ONE (708)717-9370 Naperville, Illnois since 05/92. Sysop: Craig Wells. Using MajorBBS 6.21 with 8 lines on MS-DOS with 6000 MB storage. Incomm at 2400 bps. $9 Variable fee. Over 60,000 of the most current files with new files daily. 9 cds online, over 200 MajorNet & Usenet newsgroups. Internet email w/all subscriptions. Online mags & news. Adult forums, files. Chat nights & theme nights. Phone support line. Free demo time.

Chicago Syslink (708)795-4442 Berwyn, Illinois since 06/81. Sysop: George Matyaszek. Using TBBS 2.2 with 16 lines on MS-DOS with 1000 MB storage. Hayes at 14400 bps. $30 Annual fee. Rated G, so the entire family can call. New CD-ROM online every weekend. 100+ online games, MicroMatch Find-A-Friend, Internet Fidonet, USAToday, Worldwide HUB for Virtual Sysop, outdial service to other BBS's and something for all.

AlphaOne Online (708)827-3619 Park Ridge, Illinois since 03/90. Sysop: Toby. Using TBBS 2.2 with 18 lines on MS-DOS with 8500 MB storage. Hayes at 28800 bps. $36 Annual fee. You've seen the rest-now try the best. 100,000+ files. Online stores. Chat, matchmakers, adult games 150+ conferences. Fidonet, Adult Link, GayCom. Get the most for your online $. Call & mention this ad for free trial. For more info voice-708-827-3615

THE WILD ONION! (708)993-0461 Chicago Metro-area since 05/93. Sysop: Greg Jiede. Using MajorBBS 6.21 with 50 lines on MS-DOS with 12500 MB storage. US Robotics at 14400 bps. $10 variable fee. Chicago area's premier all adult social BBS. Chat, local forums and 20+ games. 75,000+ files and GIFs online. Large adult forums area. Internet news and mail. MajorNet and Worldlink. PC Pursuit thru ILCHI. Free introductory account.

Data Warp Premium Computer Systems (713)355-6107 Houston, Texas since 07/88. Sysop: Mike Meyer. Using PCBoard 15.1 with 5 lines on MS-DOS with 2500 MB storage. US Robotics at 14400 bps. $20 Quarterly fee. One of Houston's largest general interest BBS systems. Thousands of files, dozens more posted daily. Hundreds of message conferences, including Usenet newsgroups, Internet email @dwarp.com, ILink and Annex networks. Adult areas available. Free or fee.

The Entrepreneur Connection (714)280-9556 Anaheim Hills, California since 01/94. Sysop: Tim R. Sills. Using MajorBBS 6.21 with 4 lines on MS-DOS with 500 MB storage. US Robotics at 14400 bps. $60 Annual fee. If you ever wanted to start a business but didn't know how, this is the place to call. Learn step-by-step how to start & run your own business through our business software, calendar of classes & seminars, & online bus. directory. Call now for free demo.

Interludes BBS (714)828-7093 Cypress, California since 01/89. Sysop: Angela Duarte. Using MajorBBS 6.21 with 13 lines on MS-DOS with 3000 MB storage. Supra at 14400 bps. $4.95 Monthly fee. Local numbers available. Multiplayer games, Internet mail, Usenet, Majornet mail, nationwide chat, matchmaker, and more. Home of Humanware Systems (TPD of MajorBBS utilities). Low rates. Fast and friendly system with great users.

The Solar System (714)837-9677 Mission Viejo, California since 12/88. Sysop: Peter Guethlein. Using WildCat 3.9 with 6 lines on MS-DOS with 15000 MB storage. US Robotics at 28800 bps. No fee. Awesome ANSI & RIP Graphics, FidoNet 1:103/957, Internet, Intelec, MetroLink Echomail & more. Space Theme, over 90 live door games, very unique high quality BBS, free access available, support board: B-CRC upload file duplication scanner.

Liberty BBS (714)996-7777 Anaheim Hills, California since 07/92. Sysop: David Salch. Using MajorBBS 6.21 with 183 lines on MS-DOS with 15360 MB storage. ZyXEL at 19200 bps. $10 Monthly fee. Local from 8 California area codes & Chicago. Nationwide ChatLink, WorldLink, MailLink, MajorNet, Internet & Usenet newsgroups. Use your modem to call 800-474-1818 for local & low cost SprintNet nationwide access info. Chat, games, news, & much more.

Cougar's Kingdom BBS (716)695-1937 Buffalo, New York since 06/93. Sysop: Kevin Beamer. Using GAP 6.4 with 3 lines on MS-DOS with 2600 MB storage. US Robotics at 28800 bps. No fee. Support board to CK Fantasy Sports (716)695-1931, a Fantasy Football scoring service. Call today for your free brochure and sample reports. 200+ esho forums, 6 shareware CD-ROMS, online games, Regional hub to 5 .QWK message networks, free system.

Pennsylvania Online! (717)657-8699 Harrisburg, Pennsylvania since 08/81. Sysop: George Peace. Using TBBS 2.3 with 16 lines on MS-DOS with 10000 MB storage. Hayes at 28800 bps. $8.95 Monthly fee. The gathering place for everyone. Files, chat, Internet, and more. The full FidoNet backbone and filebone and Usenet newsgroups are available. Inexpensive UUCP and SLIP/PPP. ISDN. FidoNet mail, files by FTP. FTP to ftp.pao.com, Telnet to pao.com. Visa MC

Tavern BBS (717)671-3760 Harrisburg, Pennsylvania since 09/94. Sysop: Wayne Granger. Using MajorBBS 6.21 with 32 lines on MS-DOS with 6500 MB storage. US Robotics at 14400 bps. $10 Monthly fee. Central Pa's newest and largest BBS offering Boardwatch and Online Access mag, tons of shareware, exciting games, featuring Cybertank, chat lounge and matchmaker. All with custom RIP graphics. Immediate access with free demo. Call now and join the club.

Cyberia (717)840-1444 York, Pennsylvania since 06/93. Sysop: Adam Viener. Using TBBS 2.2 with 15 lines on MS-DOS with 3300 MB storage. US Robotics at 28800 bps. $7 Monthly fee. Receive Internet mail for free. Cyberia is a professional system offering USA Today news, Boardwatch, PC Catalog, chat, Ggmes, quality shareware, Internet, Fidonet, RIP & blind access, everyone gets a free trial account. Now available via Global Access.

The Computer Shopping Network (718)225-9568 Queens, New York since 04/92. Sysop: C Capo. Using PCBoard 15.2 with 2 lines on MS-DOS with 1200 MB storage. Generic at 9600 bps. $55 Annual fee. CSN is now one of the best places to buy multi-media items. Just go to our doors area. We offer out vol. discounts to distributors. As a paid user you will receive discounts on all item in our shopping malls. Just download lcsbbs.zip for our application.

Channel 33 BBS (718)279-1585 Bayside, New York since 06/94. Sysop: Mark Goldstein. Using MajorBBS 6.21 with 4 lines on MS-DOS with 1000 MB storage. Microcom at 28800 bps. $15 Monthly fee. Info Entertainment BBS serving the Gay, Bi & Lesbian Community. Entertainment teleconference, Internet email & newsgroups, Majornet, file libraries with adult section, forums, matchmaker, interactive and single player games.

KITTY'S CAFE! (718)352-1720 Queens, New York since 08/94. Sysop: Kitty. Using WildCat 3.91 with 2 lines on MS-DOS with 3000 MB storage. Hayes at 14400 bps. $30 Monthly fee. Adult only BBS. Classified ads from all lifestyles, including Gay Lesbian Corner, B&D, plus many other alternative lifestyles. Ladies always free. Men get first month total access free. We take Master Card, Visa, AMEX, checks, or monthly billing.

Rama One BBS (R1C) (718)366-6165 Glendale, New York since 01/94. Sysop: Tommy Brunning. Using MajorBBS 6.21 with 3 lines on MS-DOS with 10000 MB storage. Telepaths at 14400 bps. $1 Hourly fee. Specializing in SVGA graphics and ASP shareware. 14 CDs full of exciting GIF images. Monthly ASP CD with the newest in shareware. Approved by the ASP. Member of the IMBBSA. Distributor for Apogee, Epic, Soleau and Software Creations. You can't lose here.

Windup BBS (718)428-6123 Bayside, New York since 01/92. Sysop: Nathan Kay. Using TBBS 2.2 with 10 lines on MS-DOS with 2000 MB storage. US Robotics at 19200 bps. $35 Quarterly fee. Live chat, both public and private. Heartbeat database, member bios and GIF's online. Message forums covering all aspects of adult lifestyles. Adult files and adult games. Real people having real adult fun. A truly unique experience.

ABC Online (718)446-2157 Queens, New York since 10/93. Sysop: Michael Hajovsky. Using TBBS 2.1 with 5 lines on MS-DOS with 21000 MB storage. Hayes at 28800 bps. No fee. Over 100,000 files, GIFs, online publications, news, databases, Internet email, and Usenet newsgroups, special interest forums, online games. All high speed 28,000 modems. One month free trial period. MasterCard and VISA accepted. You must be 18 or older

THE ICEBOX BBS (718)793-8548 Flushing, New York since 04/88. Sysop: Darren Klein. Using PCBoard 15.2 with 6 lines on MS-DOS with 34000 MB storage. Microcom at 28800 bps. $25 Annual fee. Internet Usenet access. Thousands of files available for download. Many online games. Chat live with users. Offline mail reader. New files daily. Many famous echo'd mail networks. Online multi-player role playing games. Visa MC accepted.

The Movie BBS, Inc. (718)939-5462 New York City, New York since 08/89. Sysop: Clarke Ulmer Jr.. Using PCBoard 15.1 with 12 lines on MS-DOS with 3500 MB storage. US Robotics at 28800 bps. $15 Monthly fee.10,000 GIFs of your favorite stars! Episode guides, fan clubs, CD-ROMs for purchase, video & laserdisc info, original scans. First and largest in the world!

The Northern World BBS (718)987-8786 Staten Island, New York since 08/93. Sysop: Allen Kaplun. Using MajorBBS 6.21d with 2 lines on MS-DOS with 8370 MB storage. Zoltrix at 14400 bps. $19.94 Annual fee. Over 50,000 files. FAX center, MajorNet, and online games. Soon to have 25 Gigs online. Including technical shareware, adult GIFs, more games and business applications; hacking, and phreaking info. VISA/MC/AMEX acceptd. Free 1 month trial access.

National Software Employment BBS (800)860-7860 Burlington, Vermont since 09/94. Sysop: Unknown. Using OS/2 Client/Server 1.0 with 16 lines on OS/2 with 600 MB storage. ZyXel at 14400 bps. No fee. Get a job. And let NSEBBS help. We provide the info, you provide the get go. Real jobs in 17 USA cities available via download. Fee: $.65/min, VISA/MC.

CYBERSPACE VERMONT (802)655-4108 Colchester, Vermont since 10/94. Sysop: Joe Bolton. Using MajorBBS 6.21 with 8 lines on MS-DOS with 2400 MB storage. PPI at 14400 bps. No fee. Shopping mall. Vermont places to visit, things to do, products to buy. Shop for Vermont crafted products. Plan your vacation. Experience the Vermont State of mind, the Vermont mystique. Online images via Fracterm, ordering via Omni-Mall.

Dazed & Confused BBS (803)873-5797 Ladson, South Carolina since 09/91. Sysop: Robert McElwee. Using PCBoard 15.2 with 8 lines on MS-DOS with 17000 MB storage. Supra at 28800 bps. $40 Annual fee. 24 CD ROMs, 80 online games, contests for free access and merchandise, free Internet e-mail, RIME, International Genealogy Association, tons of Doom files, Intersports Network, friendly users. Come see what you've been missing. Visa, MC, Amex.

CompuVision On-Line Entertainment System (804)548-1988 Virginia Beach, Virginia since 05/93. Sysop: Russ Salter. Using Excalibur .65 with 8 lines on MS-DOS with 2000 MB storage. ZyXel at 16800 bps. $10 Monthly fee. CompuVision is the premiere Windows based system in the country. Use our free windows terminal to view full color graphics, GIFs while online. Mouse support and sound, familiar windows interface. Say goodbye to ANSI and RIP.

Time Out! BBS (804)596-2131 Newport News, Virginia since 06/94. Sysop: Mark Solomon. Using PCBoard 15.1 with 3 lines on MS-DOS with 5000 MB storage. Hayes at 28800 bps. $45 Annual fee. Internet email and Usenet $45 per year. Relaynet(tm) International Message Exchange (RIME). Fido to come soon. Get the latest and best Doom editors, etc, and all shareware. Many current CD-ROMs, and plenty of disk space. I want to be your favorite BBS.

SHARE Warehouse (810)412-8177 Clinton Township, Michigan since 01/94. Sysop: Rick Wadowski. Using PCBoard 15.1 with 4 lines on MS-DOS with 5500 MB storage. US Robotics at 14400 bps. $35 Annual fee. Free 7 day trial. 100,000+ files on 24 CDROM's. No ratio/byte limits. Over 1300 conferences with 25,000 new msgs/day and 50-75 new files/day from our satellite downlink. Member Fido, RIME. We never ask for uploads.

TGC Adult BBS (812)284-2611 Clarksville, Indiana since 07/87. Sysop: Doctor Gif. Using WildCat 4.0M with 5 lines on MS-DOS with 4500 MB storage. US Robotics at 28800 bps. $25 Annual fee. We offer over 4.5 gigs of legal adult material ranging from still photos to animated graphic movies. Home of Doctor Gif Images and features Internet, Throbnet, Catlink and KyanaNet. Many options to subscribe and VISA MC AMEX JCB welcome.

Mercury Opus (813)321-0734 St. Petersburg, Florida since 09/88. Sysop: Emery Mandel. Using PCBoard 15 with 10 lines on MS-DOS with 12000 MB storage. Hayes at 28800 bps. $30 Half Year fee. Huge message area, over 2000 conferences, 100,000 quality Amiga, Mac, DOS, Windows, OS/2 and adult files with new files daily, 10+ networks including Internet and Usenet, games, chat, matchmaker, fax gateway, BBS lists, instant access via credit card.

A to Z Classifieds (813)726-8088 Clearwater, Florida since 07/93. Sysop: Ed Marquardt. Using TBBS 2.2 with 2 lines on MS-DOS with 210 MB storage. Hayes at 14400 bps. No fee. Classified Ads and information. Sell your car, your boat, your house, or any other item. Advertise your business. Look for employment opportunities, and much more.

BBShare! (813)758-3223 Sarasota, Florida since 07/91. Sysop: Kevin Pulford. Using WildCat 4 with 3 lines on MS-DOS with 10000 MB storage. US Robotics at 28800 bps. $7.50 Monthly fee. 14 CD-ROMS online of the latest virus free programs, many game doors, world wide echo conferences. Subscribe online for imediate access. Trial accounts are available. Many new items added monthly.

CyberSpace DataBase (813)796-5627 Clearwater, Florida since 09/82. Sysop: Steve Sanders. Using PCBoard 15.1 with 3 lines on MS-DOS with 10000 MB storage. US Robotics at 28800 bps. $50.00 Annual fee. Everything for Windows, sound cards, VGA games, DTP, HAM Radio, AMSAT, adult GIFs, utilities, applications, spreadsheets, more. 12 CD-ROMs and big hard drives. 80,000+ files. Hi-resolution GOES weather satellite photos daily. V.Fast Class modems.

The Serial Port (817)431-2342 Keller, Texas since 03/82. Sysop: Stu Jackson. Using TBBS 2.2 with 16 lines on MS-DOS with 10100 MB storage. ZyXEL at 16800 bps. $10 Monthly fee. We've moved from Michigan and love Texas. Come on by for a few files or some live chat between users. We have over 11 Gig of PD and adult files available. Ham radio and sat sections too. Games, Mail, fun. Visa, MC, Discover for instant access.

The Emporium BBS! (817)543-4250 Arlington, Texas since 10/88. Sysop: Henry Buchanan. Using Remote Access 2 with 20 lines on MS-DOS with 6000 MB storage. US Robotics at 19200 bps. $75 Annual fee. One of the largest collections of adult files. Over 17,000 adult files online. Adult games online, with online chat and messages. Adults only. Must be 21 years of age or older. Immediate adult access w/valid credit card. VISA, MC, Discover, AMEX.

Prospects (817)588-2880 Arlington, Texas since 03/94. Sysop: Franz Gletscher. Using MajorBBS 6.2 with 2 lines on MS-DOS with 230 MB storage. US Robotics at 14400 bps. No fee. D/FW Metro number access. Confidential online employment service. No fee to applicants. Upload your anonymous electronic resume, and control your job search from your keyboard. Receive e-mail notification of employers interested in you. Login today.

Panasia BBS (818)569-3740 Glendale, California since 05/89. Sysop: William Padilla. Using PCBoard 15.1 with 2 lines on MS-DOS with 425 MB storage. US Robotics at 28800 bps. No fee. We offer Internet email access and carry all conferences for the following echomail networks: Intelec, ThrobNet, PlanoNet, BasNet, JobNet, FSnet, and ILink. QWK/REP available via Qmail. Modest file area. Access is free. New users welcome. Call today.

The Wine Connection BBS (818)718-5994 Winnetka, California since 11/93. Sysop: Paul Sennett. Using TBBS 2.2 with 5 lines on MS-DOS with 250 MB storage. Zoom at 14400 bps. No fee. Your best connection for Fine Wine. Communicate with other wine enthusiasts about fine wines you want to buy or sell and also about many other wine topics. Glossary of wine terms, grape varieties, California's premium wineries, and much more.

Yolanda's Wonderland BBS (901)377-5715 Memphis, Tennessee since 10/92. Sysop: Chris DeClerk. Using Remote Access 2.02 Pro with 3 lines on MS-DOS with 7000 MB storage. US Robotics at 14400 bps. $10 Bi-Monthly fee. If you like 400 Echo message conferences, 20 online games, and over 6.2 gigabytes of files to download, you won't be dissapointed. Adults have 2.4 gigs of files, half dedicated to Gay men. Node 1 is free, Nodes 2 & 3 are 28.8 VFC HST modems. Call today.

DRAGON KEEP INTERNATIONAL (904)375-3500 Gainesville, Florida since 01/87. Sysop: Dragon. Using WildCat 6.21 with 50 lines on MS-DOS with 5000 MB storage. US Robotics at 14400 bps. $.25 Hourly fee. Realtime multi-player games, 24 Hr live chat featuring Global Chatlink every night at 10PM. Over 50,000 files, 6 CD-ROM's, MajorNet, NetAccess. Full Internet access (Telnet/IRC/FTP). Telnet to dkeep.com (198.79.54.10) Instant access w/credit card.

The Gay Blade (905)882-4800 Toronto, Ontario since 01/90. Sysop: Richard Kamus. Using TBBS 2.2 with 20 lines on MS-DOS with 5000 MB storage. ZyXel at 19200 bps. $20 Hourly fee. The Gay Blade provides online chatting, online games, and message bases of interest to those living an alternate lifestyle. Networks include GayCom, La'Net, Studsnet and Internet. A wide variety of membership alternatives are available.

Programmer's Resource Center (908)355-9298 Elizabeth, New Jersey since 04/94. Sysop: Robert Villar. Using WildCat 3.9 with 2 lines on MS-DOS with 540 MB storage. Boca at 14400 bps. $5 Monthly fee. This BBS caters to programmers and professionals. Thousands of source code files and tools to make life easier. On your first call, mention that you read Boardwatch and you get a Free 6 month subscription. Games and educational files available.

Online Connections (908)679-1297 Oldbridge, New Jersey since 06/94. Sysop: Keith Andrews. Using MajorBBS 6.21 with 4 lines on MS-DOS with 1000 MB storage. Hayes at 28800 bps. $1 for 2 hrs fee. Single? Looking for a friend, companion? Look no more. Search our database,view photographs & leave messages. Call now for 15 free minutes of access. Leave your ad & send photo. No names, phone numbers or addresses required in your ad. Chats & downloads.

INSTANT ACCESS (908)888-3959 Hazlet, New Jersey since 01/91. Sysop: Richard Camba. Using PCBoard 15.1 with 10 lines on MS-DOS with 25000 MB storage. Hayes at 28800 bps. $6 Monthly fee. Progressive adult & non adult file/msg areas. With over 22 gig of files & 1800+ satellite linked message areas to suit all lifestyles. Full Internet access. Telnet us at instbbs.camba.com. Instant access via credit card or TABS - free trail access.

NightVision (909)369-6556 Riverside, California since 11/93. Sysop: John Williams. Using WildCat 4 with 16 lines on MS-DOS with 8000 MB storage. US Robotics at 14400 bps. $69 Annual fee. Free memberships available. Call for details. Monthly amateur GIF contests, Internet e-mail and newsgroups, massive library of adult GIF's and text files, group and private chat, online games, adult networks, matchmaker database.

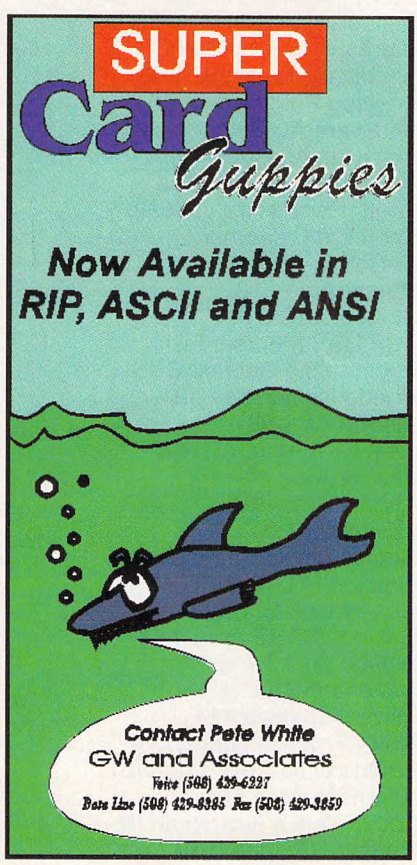
Legend Graphics OnLine (909)689-9229 Corona Hills, California since 11/91. Sysop: Joey Marquez. Using PCBoard 15.1 with 16 lines on MS-DOS with 12000 MB storage. US Robotics at 28800 bps. $5 Monthly fee. Nation's one stop graphics BBS. You will be impressed. Huge adults only file areas. Simply the best in Southern California. SuperVGA photo images, video in motion MoviePICs. Visa MC AmExp Optima accepted.

Terrapin Station (914)344-2860 Middletown, New York since 11/93. Sysop: Nick Layman. Using Proboard 2.01 with 2 lines on MS-DOS with 10580 MB storage. Zoom at 19200 bps. $10 Half Year fee. Editors Dead Board News. Deadhead related BBS with tape trading and setlists. 50Fido echos, 242 file areas on 4 cd-roms, 4 usurper games, Internet E-mail adressNon-Members have free access to Deadhead, Proboard, Apogee, Id, SWC, Epic, MVP file areas.

For Adults Only Bulletin Board System (916)962-3973 Sacramento, California since 01/88. Sysop: Dale DeBord. Using Oracomm-Plus 7.1 with 17 lines on MS-DOS with 3000 MB storage. Practical Peripheral at 14400 bps. $6 Monthly fee. Sacramento's largest and friendliest Adult chat, files system. Adult message bases, chat, GIF, GL, DL, FLI, text and game files. Free member GIFs. Referred by Adult BBS Guidebook, Cybersex, Playboy. Free 3-hour trial perion. Download on first logon.

Black Gold BBS (918)272-7779 Tulsa, Oklahoma since 06/81. Sysop: Michael Cline. Using PCBoard 15.1 with 26 lines on MS-DOS with 38000 MB storage. US Robotics at 28800 bps. $30 Annual fee. Full PageSat and Planet Connect. Telnet bgbbs.com, FTP, gopher, etc, Full time SYSOP's and much much more. Many free areas and files with 45 minutes free access per day. 350 file areas, 3+ million messages less than 7 days old. Never Porno/Just hard work

Entertainment Club BBS (919)544-7811 Research Triangle Park, North Car. since 04/94. Sysop: Brian Womack. Using WildCat 4 with 4 lines on OS/2 with 10500 MB storage. Zyxel at 19200 bps. $12 Annual fee. 1500+ file areas (40,500+ files 8 CDROMs updated quarterly) 700+ message conferences, Internet email news, FidoNet, etc, 50+ registered multi-user games, color scanning, matchmaking connection (doors, parties), will add areas at user request. Bargain.



BOARDWATCH
List of BBS List Keepers

This listing comprises a list of those who compile and maintain lists of bulletin boards, either by topical category, or by some geographic area or definition - often by area code. The primary bulletin board system where the list can be downloaded electronically is also included.

BBSLIST TOPIC	AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
New Jersey BBS's	Scott Drake	T.E.R.N. BBS	(201)399-4772
Connecticut AC 203	Kevin Brook	Creative Edge BBS	(203)743-4044
BBS With Handicapped Focus	Bill McGarry	Handicap News BBS	(203)926-6168
Known Networks	Victor Laking	Generic BBS	(204)475-5199
Manitoba, Canada List AC 204	Victor Laking	Generic BBS	(204)475-5199
Seattle AC 206/West Washington	Bob Dinse/Nanook	Eskimo North	(206)367-3837
Tacoma Washington AC 206	Richard Langsford	AmoCat BBS	(206)566-1155
Puget Sound Area	Art Tomlin	Orion Station	(206)675-0565
Kitsap County Washington	Michael Schuyler	Quicksilver BBS	(206)780-2011
Maine 207	Scott R. Bodeen	Street Corner BBS	(207)442-0997
Modesto, CA BBS List	Chris Mitchell, "Gomba"	Anything Goes	(209)491-0782
Central California AC 209	Jack Porter/Madera UG	Zen Den Systems	(209)675-8436
San Antonio TX (AC 210) BBS	Donna Murrell	Main Complex BBS	(210)658-8009
Graphical User Interface BBS	David Shapiro	The Gooey (GUI) BBS	(212)876-5885
96 List - 9600+bps BBS	Ken Sukimoto	Downtown BBS	(213)484-0260
Employment BBS's	George Smith	Executive Connection	(214)306-3393
Dallas/Ft.Worth BBS List	Mark Elson/Mike Shockley	Blues Cafe	(214)638-1181
Open Access UNIX Site List	Phil Eschallier	LGNP1 (login:BBS)	(215)348-9727
Cleveland Area 216	Jim Barry	Flip Flop	(216)951-9134
Educational BBSs	Joe McIntosh	KSI Public BBS	(219)626-2150
Educational and Indianna BBS	Joe McIntosh	KSI Public BBS	(219)626-2150
Conservation/Nature BBS List	D.Wendling/JS Christianso	Coin of the Realm	(301)585-6697
Ham/Amateur Radio BBS	Stan Staten	3WINKs BBS	(301)590-9629
Handicapped Issues BBS	Richard Barth	HEX BBS	(301)593-7357
Desktop Publishing BBS	Frank Atlee	Infinite Perspective	(301)924-0398
Delaware AC 302	Vince Boehm/Dave Osburn	Talk Radio BBS	(302)429-7667
Colorado AC 303/719	Willis Morrow	Big Boy's BBS	(303)458-3832
Cave Exploration BBSs	Douglas L. Moore II	The CatEye BBS	(304)592-3390
South Florida Area 305/407	Eric Thav	Silicon Beach BBS	(305)474-6512
Southern California	Mike Hefferman	SOCAL Corner	(310)422-7942
California AC 310	Jim Walton	Illusions BBS	(310)804-3324
Detroit Area 313	Horst Mann	Tony's Corner	(313)754-1131
St. Louis AC 314	Beth Brooks	Fire Escape's Dir	(314)741-9505
ASP BBS Member List	Richard Holler	The RoadHouse BBS	(317)784-2147
Engineering Related BBS	Arthur Petrzelka	Computer Plumber	(319)337-6723
Rhode Island Area 401	Mike Labbe	Eagle's Nest	(401)732-5292
Alberta AC 403	Stephen Decarie	T-8000	(403)246-4487
Calgary Alberta AC 403	Jeremy Birkett	The Quantum BBS	(403)252-5119
Atlanta Area 404	Online Atlanta Society	OASIS	(404)627-2662
Atlanta Area 404	Rodney Aloia	The INDEX System	(404)924-8472
Montana Area	Jay Michalik	Valley Light BBS	(406)273-6399
Searchlight BBS Systems	Chad Payne	Montana MediaNet	(406)549-6325
Orlando BBS List AC 407	Lenny Lacuy	Infinite Space Onlin	(407)856-0021
San Francisco Bay Area	Mark Shapiro	BABBA BBS	(408)946-8592
Baltimore BBS Area 410	Brad Blase	Silver Streak BBS	(410)683-0300
Pittsburgh AC 412	Chas Stokes	Zuul's Catacombs	(412)264-9787
National BBS List	DP McIntire/Beth Spotts	Ameriboard	(412)349-6862
Miwaukee Area 414	Mark G.	The Castle	(414)327-5085
North America Nudist List	Patrick O'Brien	Natural Connection	(414)426-2110
Toledo Ohio Area 419/313	Ryck Zarick	Toledo's TBBS	(419)475-2241
Arkansas Area 501	Bob Underdown	The Blue & The Grey	(501)444-8420
Louisville KY and South IN	Tim Arnold	Dance of Shiva BBS	(502)893-6360
Portland Oregon BBS	Lisa Gronke	DawGone Disgusted	(503)297-9145

BBSLIST TOPIC	AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
New Orleans AC 504	Darin Celino	Southern Belle BBS	(504)455-9488
New Mexico Area Code (505)	Dan Kiehl	MDC Computers BBS	(505)434-0258
Apogee/ID/Software Crtns List	Dan Linton	Software Creations	(508)368-7139
PCBoards on Internet	Ruben Melo	ponyXpress BBS	(508)587-7669
Worcester MA AC (508)	Jim Metzler	Miwok Village BBS	(508)754-6512
Corpus Christi	James Cordani	Treasure Island	(512)241-8358
Austin Area BBS List AC 512	John Foster	Camel's Back BBS	(512)243-0077
Selected BBS	Joseph Caplinger & Son	J&J's BBS	(513)236-1229
AC 516 Free Shareware BBS	Harold Stein	Long Island Exchange	(516)271-5303
Area Code 517 - Mid-Michigan	Rick Rosinski/SAMM	Wolverine BBS	(517)695-9952
Phoenix AC (602)	John Mendivil	Majestic Royalty BBS	(602)278-1651
Phoenix AC (602)	Sue Widemark	Cheese Whiz BBS	(602)279-0793
Cochise County Arizona	Kevin McCrory	The Commo Shack BBS	(602)452-0587
Arizona and Southwest U.S.	Michael	BBSouthWest	(602)820-7861
New Hampshire BBS's	Mike Maggi	Marios Birdhouse	(603)226-0467
Victoria/Vancouver AC 604	Mark Morley	Island Net	(604)477-5163
Kentucky AC (606)	Jon Hagee	Kentucky Explorer	(606)271-1451
Wisconsin 608	Jim Wargula	JW-PC Dataflex.HST	(608)837-1923
New Jersey AC 609	Dave Schubert	The Casino BBS	(609)485-2380
New Jersey Area 201/609/908	Wayne R. Morton	Praedo BBS	(609)953-0769
Medical Issues BBS	Edward Del Grosso	Black Bag	(610)454-7396
Job Search and Inet hot list	Ward Christman	Online Opportunities	(610)873-7170
Minnesota Twin Cities AC 612	Barry Watson	Abiogenetic BBS	(612)774-8454
Apple II BBS	Mike Shecket	Way Out	(614)436-4846
Tennessee AC 615/901	unknown	SPDA Info Service	(615)952-5638
Business/Professional BBS	Dennis Hauser	Delight The Customer	(616)662-0393
Female Sysops	Brenda Donovan	The Pacific Rim	(619)278-7361
San Diego, CA AC 619	Tom Grigg	ComputorEdge	(619)573-1675
San Diego AC 619	Joe Nicholson	General Alarm	(619)669-0385
Apple II BBS with Internet con	Morgan Davis	pro-sol	(619)670-5379
Virginia AC 703/804	Eddie Gebhard	PC Power House	(703)348-1423
OS/2 BBS Systems	Pete Norloff	OS2/Shareware BBS	(703)385-4325
Geneology Related BBS	Richard A. Pence	NGS-CIG	(703)528-2612
Charlotte, NC AC 704	Blaine Schmidt	Moobasi Optics, Ink	(704)541-9842
Indigenous People BBSs	Arthur McGee	BDPA BAC BBS	(707)552-3314
Black Run/Oriented BBS	Arthur "Rambo" McGee	BDPA BAC BBS	(707)552-3314
Chicago	Peter Anvin	Royal Swedish Viking	(708)491-9036
Gay & Lesbian BBS List	Billy Kennedy	Risqilly BBS	(708)495-6609
Airline Pilot/JUMPSEAT BBSs	Rex Chadwell	ChicAAgo Hangar	(708)980-1613
Houston Area 713	David E. Wachenschwanz	Atomic Cafe BBS	(713)530-8875
Korean BBSs	Wayne Jeong	Korea America Online	(714)449-9373
Area Code 715 BBS's	Corey Koltz	YES It's another BBS	(715)345-7132
Rochester NY AC 716	Tracy Logan	Logan's Run	(716)328-2914
RIP BBS Listing	Mario Mueller	Antarctica BBS	(717)755-2440
717 AC BBS Listing	Adam Viener	Cyberia	(717)840-1444
Vermont BBS's	Russ Boyce	Computer Ser. of Ver	(802)334-7976
Ecology/Conservation BBS	Bob Chapman	EarthArt BBS	(803)552-4389
Central California Area 805	Larry Honore	His Board	(805)652-1478
Wildcat! BBS	Jim Harrer	Wildcat! HQ	(805)873-2400
Oahu Hawaii	Brent Davis	Land's End BBS	(808)499-2527
Technical Support BBS List	Gary Barr	Digicom BBS	(812)479-1310
Pinellas/Tampa Florida AC 813	Emery Mandel	Mercury Opus	(813)321-0734
Kansas City Area 816/913	Bob Zumbrunnen	PC-HELP BBS	(816)331-4703
Dalls Fort Worth BBS List	Mark Robbins	Second Sanctum	(817)467-1175
Occult BBS	Phil Hansford	Mysteria	(818)353-8891
Commodore 64/128/Amiga BBS	John Rigali	Night Gallery	(818)448-8529
Texarkana BBS List	Rodney Payne	Internet Connection	(903)793-7173
Durham Region-Ontario Canada	Shawn Berry	Seventh Dimension	(905)571-6052
Alaska AC 907	Patti Johnson	Alaska Pirate Soc.	(907)248-9364
Travel Related BBSs	Robert Southwick	AK Information Cache	(907)373-3205
Darwin National USBBS List	Bob Breedlove	Bob's BBS	(916)929-7511
OS/2 Related BBS	Dave Fisher	LiveNet 1:170/110	(918)481-5715
Tulsa Oklahoma Area BBS List	Linda Hargraves	ACCESS AMERICA	(918)747-2542
Raleigh NC Area Code 919	Mike Stroud	Micro Message Svc.	(919)779-6674
National ISDN BBS list	Ken Morrison	Digital Velocity BBS	(919)992-3059
Republic of South Africa	Henk Wolsink	Catalyst BBS	27-41-34-1122
Switzerland BBS List	Cesar Keller	The Warehouse BBS	41-1-492-5157

BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARDS AND ONLINE INFORMATION SERVICES - November 1994

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
ABC On-Line	(718)446-2157	21 Gigs online, TBBS, Internet, Fidonet, Entertainment, News	Michael Hajovsky	Queens, NY
Ability Online Support Network	(416)650-5411	Support BBS for sick children and young adults.	Brian Hillis, Dr. Arlette Lefebvre	North York Ontario,
ADA 9X Project Bulletin Board	(800)232-9925	ADA Programming Language Revisions and News	Chris Anderson/Susan Carlson	Eglin AFB, FL
ADA Information Clearinghouse	(703)614-0215	Information on ADA Programming Language/Military Specs	Department of Defense	Washington, DC
Advanced Data Services Inc.	(301)695-9116	22 line PCBoard with 5.5 GB of Files	Blaine Brodka	Frederick, MD
Alamo PC Organization	(210)496-5558	Numerous Files, Info	Robert Schoenert	San Antonio, TX
Albuquerque ROS	(505)299-5974	36000 files/USA Today/Tradewars/Online Games	Steven Fox	Albuquerque, NM
America's Suggestion Box	(516)471-8625	BBS Devoted to Collecting and Distributing Consumer Feedback	Joseph G. Jerszynski	Ronkonkoma, NY
American Cybernetics BBS	(602)968-1082	Multi-Edit Product Support BBS	American Cybernetics	Tempe, AZ
AMUG Preferred BBS	(602)553-0721	Support for Mac users, 15,000 files, Conferences	Arizona Macintosh Users Group Inc.	Phoenix, AZ
ANARC BBS	(913)345-1978	World Radio/TV Handbook - Short Wave Freq Lists/Scheds.	Assoc. of North American Radio Clubs	Shawnee Mission, KS
APCUG - GlobalNet	(408)439-9367	Association of PC User Groups - Over 2000 UG officers	Paul Curtis/APCUG	Scotts Valley, CA
Applied Modeling Research RBBS	(919)541-1325	Environmental Protection Agency Atmospheric Models	William Peterson/EPA	Hurdle Mills, NC
Aquila BBS	(708)820-8344	6 GB 25 Nodes Fidonet/Interlink/Metronet MCe IL/CHI Graphics	Kevin Behrens/Steve Williams/Doug Bell	Aurora, IL
Argus Computerized Exchange	(617)674-2345	Multiline Community Chat Service - Restuarant Review dbase	Pam Morrison	Lexington, MA
AST Technical Services BBS	(714)727-4723	Superb support system for AST Computer Products	AST Research Inc.	Irvine, CA
AT&T Support BBS	(908)769-6397	Support for PC 6300 and Other AT&T PC Models	American Telephone/Telegraph PC Division	Plainfield, NJ
ATI Support BBS	(905)764-9404	Support for ATI Modems and Video Cards	ATI Technologies	Scarborough, ONTARIO
Atlanta Information Systems BBS	(404)939-1248	Natl echomail conferences, Internatlconferneces, files	Rodney Aloia	Tucker, GA
Atomic Cafe BBS	(713)530-8875	Home of Houston Area 713 BBS list, Connect Magazine	Connect Communications Co	HOuston, TX
Atomic Cafe BBS	(713)530-8875	Houston Area BBS list and Connect! Magazine	David Wachenschwanz	Houston, TX
Atri BBS	(903)758-2784	4 Gigs Online All Fidonet Message areas Over 200 door games	Walter Cade	Longview, TX
Attention to Details	(714)681-6221	Utilities/ASP/Patriquin Utils/Protocols	Clint Bradford	Mira Loma, CA
Audiophile Network	(818)988-0452	High-end Audio Components, Music, Video Reviews	Guy Hickey/Quatre Speakers	Van Nuys, CA
Automobile Consumer Services	(513)624-0552	New Car Pricing Reports - Used Car Value Reports	Automobile Consumer Services Inc.	Cincinnati, OH
AviTechnic 1:261/662	(301)252-0717	Software Distribution System - BBS Utilities	Tom Hendricks	Lutherville, MD
BBS America	(214)680-3406	Home of DFW Online Electronic Newsletter	Jay Gaines	Richardson, TX
BCS BBS	(213)962-2902	Los Angeles' First Super BBS Under Development	Jim Lee	Los Angeles, CA
BCS IBM BBS	(617)964-2540	IBM PC Topics - TBBS Software (Internet)	Boston Computer Society/Martin Hannigan	Boston, MA
BCS Info Center BBS	(617)621-0882	General Topics - TBBS - Internet Mail	Boston Computer Society/Martin Hannigan	Boston, MA
BCS Mac BBS	(617)864-0712	Macintosh Topics - Firstclass BBS Software	Boston Computer Society/Martin Hannigan	Boston, MA
Beach Board BBS 1:371/1	(813)337-4950	Over 100 online games - Internet Mail - 8 lines - 48000 fls	Dave Ward	Fort Myers, FL
Beyond Eternity	(310)371-3734	Home of EEEK! Bits - Weekly Electronic Trivia Magazine	J. Black/K. Taghadossi	Torrance, CA
Beyond the Realm	(805)987-5506	200+ message areas 60+ file areas Fidonet VNet Adult Topics	Lee Ladisky	Camarillo, CA
BMUG BBS	(510)849-2684	Support for Macintosh owners - files - conferences.	Berkeley Macintosh Users Group	Berkeley, CA
Boardwatch Magazine Online Info	(303)973-4222	Distribution Service for USA Today/Boardwatch/Newsbytes	Boardwatch Magazine	Littleton, CO
Book BBS	(215)657-6130	Information on 2000 Computer Books - 800 order number	Business & Computer Book Store	Willow Grove, PA
Book Stacks Unlimited	(216)694-5732	200,000 Book Titles Database - Online Ordering	Charles Stack	Cleveland, OH
Borland Download BBS	(408)431-5096	Utilities, Macros, Programming Examples for Borland Products	Borland International/Mike Fitz-Enz	Scotts Valley, CA
Botnay Bay EIS	(603)431-7229	20 GB of Files - Adult areas - BBS Lists	Myles Bratter	Portsmouth, NH
Boundary Waters BBS	(218)365-6907	Canoe Trips/Resorts/Fishing/Wilderness in Minnesota	Gary Knopp/InfoNorth	Ely, MN
Bruce's Bar & Grill	(203)236-3761	24-line Social System - Chat - Games - Downloads	Bruce Lomasky	West Hartford, CT
Bryant Software	(303)733-0773	Support & Demo of Bryant Software & TBBS Products	Alan Bryant	Denver, CO
C.A.R.L Library Service	(303)758-1551	Citations to 4 Million Texts in Colorado Library System FREE	Colorado Alliance of Research Libraries	Denver, CO
CAD/Engineering Service	(615)822-2539	Computer Aided Design File Distribution Network 1:116/32	Stan Bimson	Hendersonville, TN
Canada Remote Systems	(416)213-6003	23GB/400000+ files, 3500 Conf's,USENET, IBM/Amiga/Mac	Neil Fleming/Jud Newell	Mississauga, ONTARIO
Capital PC User's Group BBS	(301)738-9060	One of the oldest PC User's Groups - 5500 members	Capital PC Users Group/Roger Fajman	Rockville, MD
Career Connections BBS	(417)917-2127	Hi tech jobs and career positions	Sandhya Dave	Los Altos, CA
Castle Tabby 107/412	(908)988-0706	Home of TABBY Fidonet Interface Program for Apple Macintosh	Michael E. Connick	Bradley Beach, NJ
Caverns of the Abyss	(405)482-2980	4 Gigs Online CD Roms	Shannon Graham	Altus, OK
CBBS/Chicago	(312)545-8086	First Electronic Bulletin Board - Since 2/16/78	Ward Christensen/Randy Suess	Chicago, IL

CD Connection	(408)985-8982	90000 Compact Disks, Order Online (telnet:cdconnection.com)		,
Celebration Station	(207)667-0800	Adventure Games, Chat, and Sigs - Children	Noel Stookey (Paul of Peter,Paul & Mary)	Blue Hill Falls, ME
Central Point Software	(503)690-6650	PC Tools - Central Point Anti-virus support board	Central Point Software Inc.	Beaverton, OR
Channel 1	(617)354-8873	70-line PCBoard - 8 GB Files - Internet - 1000's msg. confs.	Brian Miller/Tess Heder	Cambridge, MA
Chicago SysLink	(708)795-4442	Special Interest Areas for Ferret/Pet Owners.TRS80/Aviation	George Matyaszek	Berwyn, IL
Chinet	(312)283-0559	UNIX System offering Internet Mail	Randy Suess	Chicago, IL
City Lites PCBoard	(701)772-5399	9 GB files, Rimenet, Internet, FidoNet, ASP, Online Orders	John Lundell	Grand Forks, ND
City Online	(909)860-Line	City Government BBS Rip/Internet & more	Troy Butzlaff	Diamond Bar, CA
Classified Connection BBS	(619)566-7347	Giffy Girls - Nude GIF Images of the Girl Next Door	Bill Kennon	San Diego, CA
Cleveland Freenet	(216)368-3888	Cleveland City Info/Public Library - Free Internet Mail Box	Case Western University/AT&T/Ohio Bell	Cleveland, OH
Cloud Nine	(713)855-4382	15 meg, 30 Nodes	Harold Lucas	Houston, TX
Club Infinity BBS	(619)726-8878	Missing children, Wanted persons, On-line shopping, Mail	Dennis Di Toro	Fallbrook, CA
Colorado Connection	(303)423-9775	Breeding, Raising, Taming, Exotic Birds	Terry Rune/Dave McClauggage	Arvada, CO
Community News Service (CNS)	(719)520-5000	News and Entertainment - 17 Lines Community Focus	Klaus Dimmler	Colorado Springs, CO
Compact Audio Disk Exchange	(415)824-7603	Buy/Sell/Trade Compact Audio Disks Online	Wayne Gregori	San Francisco, CA
Computer Business Services	(714)396-0014	Book/Publishing Consultant Nick Anis' BBS	Nick Anis Jr.	Diamond Bar, CA
Computer Business Services	(909)396-0014	Book/Publishing Consultant John C. Dvorak & Nick Anis' BBS	Nick Anis Jr.	Diamond Bar, CA
Computer Garden	(301)546-1508	Treasure Hunting - Metal Detectors - Online Catalog	Milford P. Webster	Salisbury, MD
Computing Canada Online	(416)497-5263	Adjunct to Excellent Canadian PC Newspaper	Computing Canada Newspaper	Willowdale, ONTARIO
Crosstalk Communications BBS	(404)740-8428	Product Support for Crosstalk for Windows/MK4/XVI	Digital Communications Associates	Roswell, GA
Cul-de-Sac Bar & Grill	(508)429-1784	Multiline Service - Ham Radio - Humor - TDBS Applications	Pete White	Holliston, MA
CyberStore - a COCONET BBS	(604)526-3676	All lines to v.32bis/v.42/v.42bis. CyberTools for BBS'es	CyberStore Online Info. Systems Inc.	New Westminster, BC
DAK Online Resource Center	(818)715-7153	DAK Mail Order Catalog - Breakmakers - CD ROMS - Computers	DAK Industries/Tom Krogh	Canoga Park, CA
Dark Side of the Moon	(408)245-7726	Home of WAFFLE, Unix UUCP BBS Software for DOS and UNIX	Thomes E. Dell/Darkside International	Mountain View, CA
Data Bank	(913)842-7744	Information HQ, Support Board, Net-Mail & Files	Bob Oyler	Lawrence, KS
Data Core BBS	(310)842-6880	25 line Major BBS	Matthew Schoen/Delta Enterprises	Los Angeles, CA
DataLink RBBS System	(214)394-7438	Weather Satellite Imaging, NOAA Satellite Tracking-AMSAT-NA	Dallas Remote Imaging Group/Jeff Wallach	Carrollton, TX
Dawg*Star	(615)385-4268	ANSI Art Club 1:116/29	Kevin Snively	Nashville, TN
Deep Cove BBS	(604)536-5885	16 line TBBS, 3500 MBytes files for IBM, MAC, Amiga	Wayne Duval	White Rock, BC
DEMO Link	(303)220-0328	Free Demo Downloads of Quattro Pro/Lotus Magellan/More	BIX/Byte Magazine	,
Denver Exchange, The 104/909	(303)458-1227	28 Lines Adult BBS/Internet/Files/Chat/Games/Publications	James Craig	Denver, CO
Denver Free-Net	(303)270-4865	Free Community Online Service - Health Info	University of Colorado Health Science	Denver, CO
Digicom	(812)479-1310	Home of Tech Support BBS List, Online Magazines, 1.7 Gigs		Evansville, IN
Digital Logic Systems	(303)347-2921	Rip screens, Internet e-mail, USA Today, Newsgroups	Jerry and Robin McCarthy	Littleton, CO
Digital Velocity BBS	(919)992-0407	ISDN BBS. Tehnical support for ISDN and BBS's.	Mark Thompson	Research Triangle Park, NC
Distant Mirror BBS	(615)648-1782	Free Access BBS	Steve Perlo	Clarksville, TN
DNIS	(619)864-1468	Outstanding BBS Gateway to multiple information services	Mike Simmons	Palm Springs, CA
Duke Graphics of San Diego	(619)793-8360	7 CD Roms Online, 4 gigs 50,000 files	Chris Duke	San Diego, CA
EarthArt BBS	(803)552-4389	Wildlife/Conservation Art Gallery GIF Images	Ambassador Wildlife Gallery/Bob Chapman	North Charleston, SC
Ed-Net	(604)732-8877	Vancouver School Board Multi-Line Educational Network	Barry Macdonald/Vancouver Board of Ed	Vancouver, BC
Electric Ideas Clearinghouse	(206)586-6854	Energy Efficiency Efforts In Pacific Northwest-HydroElec	Bonneville Power Administration WSE	Olympia, WA
Electronic Publishers BBS	(503)624-4966	News-Finance-Sports-Games-2GB File Library	Brian Cash	Portland, OR
Electronic Zone, The	(412)349-3504	Specializing in Hypertext	William R. Forbes	Indiana, PA
Energy Info Admin E-Publications	(202)586-8658	Variety of Petroleum/Coal/Electricity Energy Statistics	US Department of Energy	Washington, D.C.
Entertainment & Graphics	(503)697-5100	Entertainment & Graphics	Jim Maxey	Lake Oswego, OR
eSoft Product Support BBS	(303)699-8222	Home of The Bread Board System (TBBS) BBS Software	Phil Becker/eSoft Inc.	Aurora, CO
Event Horizons	(503)697-5100	64 Line Digitized Graphics Image Library - Adult .GIF files	Jim Maxey	Lake Oswego, OR
Everton's On-Line Search	(801)752-6095	Searchable genealogy databases with 3,000,000 ancestor names	Ron Olsen, Travis Hayes	Logan, UT
EXEC-PC	(414)789-4210	Largest BBS in US - 280 Lines -650,000 files - 35 Gigabytes	Bob and Tracey Mahoney	Elm Grove, WI
Executive Network	(914)667-4567	Interlink Netmail National Host - Multiline PCBoard System	Andy Keeves	Mt. Vernon, NY
Eye Contact BBS	(415)255-5972	22 line Oracomm - Gay Issues - Popular Chat System	Bill Montgomery	Mill Valley, CA
FAA Flight Standards ASO-FSDO-15	(800)645-3736	FAA Flight Standards Publication & Info for the Aviation Com	FAA/Bill Hoenstine	Orlando, FL
Falken Support BBS	(703)803-8000	Support for FALKEN software - 16 lines - doors - chat	Herb Rose	Woodbridge, VA
Farwest BBS	(604)381-3934	Large Western Canada Galacticomm Info System	Ren L'Ecuyer	Victoria, BC
FAX/Satellite Services BBS	(619)224-3853	NOAA Weather Satellite Images - Russian/Japanese Sat Pics	Scotty Olson	San Diego, CA
FCC Public Access Link	(301)725-1072	Equipment Authorization Status Advisory Service	Federal Communications Commission	Columbia, MD
FCC WORLD	(202)887-5718	FCC Documents, Forums	Smithwick & Belendiuk, P.C.	Washington, DC

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BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARDS AND ONLINE INFORMATION SERVICES - November 1994

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
FCC World	(202)887-5718	FCC policies, court decisions, and related matters to FCC	Smithwick & Belendiuk, PC.	Washington DC,
FEDLINK ALIX II	(202)707-4888	Info on Federal Libraries -Excerpts Library of Congress News	Federal Library Information Network	Washington, D.C.
Fido Tech Stand	31-30-735900	Fidonet Technical Information for Holland	J.J. van der Maas	Utrecht, HOLLAND
Fire & Ice	(313)373-8608	A Family BBS With Christians Discussions	William Sims	Drayton Plains, MI
Fisherman's Net	(614)837-0400	Dedicated to Fisherman	Lloyd Davidson	Carroll, OH
FOG City BBS 125/10	(415)863-9697	Gay Community BBS - AIDS Info - Desktop Publishing - MACs	Bill Essex	San Francisco, CA
Foundation Online Service	(203)968-8752	15+ Gigs 8 Lines Internet	David Deutsch	Stanford, CT
Fred the Computer	(508)872-8461	Newspaper BBS. Wierdnet Newswire. List of MA Libraries	Middlesex News-Adam Gaffin	Framingham, MA
FreeBoard BBS, The	(804)744-0797	Desktop Publishing File Distribution Network 1:264/212	Bill Hunter	Midlothian, VA
Fun Connection	(503)753-8431	Multiline Entertainment - 8 Lines Games/Chat/News	Vincent Reece	Corvallis, OR
Galacticomm Demo System	(305)583-7808	Customer support for Major BBS	Galacticomm	Fort Lauderdale, FL-
Garbage Dump	(505)294-5675	Hottest Chat in America - National Access $1.75 per Hour	Dean Kerl & Simon Clement	Albquerque, NM
Gateway Communications BBS	(714)863-7097	Novell Netware/TCP-IP Shareware Utilities	Carol De Jesus	Irvine, CA
Gateway On-Line	(313)291-5571	Interactive Chat,MulitiplayerGames,Usenet/Internet,E-mail	Jeff Breitner/Bill Mullen	Rockwood, MI
GDP Technologies	(303)673-9470	Outstanding IBM Shareware on a small system	Tom Getty's	Lafayette, CO
General, The	(619)281-8616	Popular File Library - GIF Images	Marc Teitler	San Diego, CA
GISnet BBS	(303)447-0927	Graphics Information Systems/Mapping topics	Bill Thoen	Boulder, CO
GLIB	(703)578-4542	Gay and Lesbian Information Bureau - 11 Lines - 9600 bps	Community Educational Svcs. Foundation	Arlington, VA
GPO WINDO Online Service	(202)512-1387	Fed Information from EPA, DOE, State Department - others.	US Government Printing Office	Washington, DC
Greenpeace Environet	(415)512-9108	Ecological and Peace Issues - Disarmament/Toxics/Wildlife	Dick Dillman/Greenpeace	San Francisco, CA
Hackers R Us Online	(602)945-8416	Online Games, Files & Tech Discussions	David Ray	Scottsdale, AZ
Hackers World BBS	(309)672-4405	Adult Files, Fidonet Echo-Mail Adult-net	Martin Belcke	Peoria, IL
Harris City Medical BBS	(713)790-1093	Medical Information	Monica Faulk	Houston, TX
Hayes Advanced Systems Support	(800)874-2937	Customer Support Line for Hayes Customers. V-series/Ultra	Hayes Microcomputer Products	Norcross, GA
Heartland Free-net	(309)674-1100	Community Online Service - Free Internet E-Mail Boxes	Peoria County Board/Bradley University	Peoria, IL
Herpnet/Satronics TBBS	(215)698-1905	Reptile and Amphibian Studies - Poison Snakes/Toads/Fish	Mark Miller	Philadelphia, PA
HH Info-Net BBS	(203)246-3747	MS Windows and OS/2 Files our specialty	Lee Winsor	New Hartford, CT
HoloNet	(510)704-1058	National Access,INTERNET,USENET,CHAT,GIFS,FILES	Information Access Technologies, Inc.	Berkeley, CA
HouseNet BBS	(410)745-2037	Home Fixup/Repair/Renovation Tips, Advice, and Articles	Gene and Katie Hamilton	St. Michaels, MD
Howard's Notebook 1:280/25	(816)331-5868	Environmental, Peace, Justice since 1982 - 4 nodes	Jim Howard	Kansas City, MO
Hysterics	(613)231-7144	Amiga File Distribution Network 1:163/109	Russell McOrmond	Ottawa, Ontario,
IBM National Support Center BBS	(404)835-5300	IBM PC User Groups Database - Newsletter Exchange	IBM National Support Center	Atlanta, GA
Inbound/Outbound/Teleconnect	(212)989-4675	Telephone Sales Trade Magazine Online Service	Harry Newton Publications	New York, NY
Infinite Space Online	(407)856-0021	32 Line Interactive Chat & Games Majornet	Charlie Scherker	Orlando, FL
InfoHost Demo BBS	(201)335-2253	Demo BBS for InfoHost BBS Software - Multiline - Database	A-Comm Electronics Inc.	Hasbrouch Heights, NJ
Inns of Court, The	(214)458-2620	LAN Related Files and Utilities 1:124/6101	Arthur Geffen	Dallas, TX
Intel PCEO Support BBS	(503)645-6275	Support for Intel PC Products - Inboard 386/AboveBoard 286	Intel Corporation PCEO Division	Hillsborough, OR
Inter Comm	(702)359-2666	6 Line 5.5 Gig 30,000 Files	Roger Brown	Spark, NV
InterMail Tech Support BBS	(305)436-1884	Home of InterMail, Front End Mailer for FidoNet 1:369/102	Patrik Bertilsson	Hollywood, FL
Invention Factory	(212)274-8110	46 Lines - 100 Directories - Full Usenet Feed - 8.2 GB	Mike Sussell	New York, NY
Investor's Online Data	(206)285-5359	Online Investment/Stock Market Information/Tech Analysis	Don Shepherdson	Bellevue, WA
JDR Microdevices BBS	(408)494-1430	Online Hardware Order - Catalog - 1.1 GB Files - Quizzes	JDR Microdevices	San Jose, CA
JOBBS	(404)992-8937	Online Job Listings - 2186 Technical Pos. - 10,000 Corps.	Alpha Systems Inc./Bill Griffin	Roswell, GA
Keith Graham Shareware Support	(914)623-0039	OPTIK, TEXT2COM, CBOOT, very good shareware utilities	Keith P. Graham	Nyack, NY
KIMBERELY BBS	(612)340-2489	Prime Rate-Fed Funds-T-Bill-Discount Rate-Economic Data	Federal Reserve Bank of Minneapolis	Minneapolis, MN
King's Market BBS 104/115	(303)665-6091	400 MB Books, Writers Area - TRS 80 Support	Jim and Karen Burt	Boulder, CO
Knight Vision BBS	(213)344-3600	Chess and Backgammon - 8 lines - "Intelligent Entertainment"	Matthew Beelby	Pasadena, CA
Lace's Place	(718)822-3552	Female Domination Adult BBS online since 7/91	Ellen Grogan	New York City, NY
LANtastic BBS	(602)293-8065	Support for LANtastic local area network	Artisoft Inc.	Tucson, AZ
Late Night Software 125/555	(415)695-0759	Home of UFGATE - Software to connect PCs to UUCP/Usenet	Tim Pozar	San Francisco, CA
LegalEase	(509)326-3238	Legal issues/Forms - Law BBS List	Bill Sorcinelli	Spokane, WA

LICA Limbs BBS	(516)561-6590	Member written software PC Board 15.0 USR HST Since 1980	Dave Minott	Valley Stream, NY
Lincoln Cabin BBS	(415)752-4490	General Interests & Rime	Steve Pomerantz	San Francisco, CA
MAC-LINK	(514)486-8959	Macintosh Oriented Support BBS - 6 Lines - Infomat/BIX	Mark Smith	Montreal, QUEBEC
Macalot Bulletin Board	(412)846-5312	Support for Second Sight BBS Software for Macintosh	Jeff Dripps/FreeSoft Company	Beaver Falls, PA
MacCircles	(303)526-2219	Mac System Software distributor, mail, sigs, files	Patricia O'Connor	Golden, CO
MacInternational	(803)798-3755	Macintosh support since April '85. FirstClass BBS	Ralph Yount	Columbia, SC
Magpie BBS	(212)420-0527	Support/Demo System for Magpie BBS/Conferencing Software	Steve Manes	New York, NY
Mariners Bulletin Board	(708)866-8257	Information for boaters and sailors. Covers Lake Michigan	Bob Loonsbury	Evanston, IL
MaxiHost Support BBS	(209)836-2402	MaxiHost BBS - small, very easy to run BBS	Don Mankin	San Ramon, CA
Mayan Antiquities	(214)691-1316	Mayan Culture and Antiquities	Ron Whipple	Dallas, TX
McAfee Associates BBS	(408)988-4004	Computer Virus Information - VIRUSCAN and CLEANUP	John McAfee/CVIA	Santa Clara, CA
Med Technet	(716)688-1552	Educational research for Clinical Laboratory professionals	Bill Hliwa	East Amherst, NY
Medi-Call BBS	(818)330-1739	Active 2 lines PubSvc w/ 120 netmail confs., & GIGs of Files	Gordon Huyck	La Puenet, CA
Meeting Works, The	(212)737-6932	Meeting/seminar/convention planning information.	John Mackenzie	New York, NY
METRO Online Entertainment	(212)831-9280	32 line DLX with City Guide/Ski Database - Matchmaker - Chat	Bruce Kamm/Metro Online Services	New York City, NY
Micro Foundry, The	(415)598-0398	2.2 GB Downloads - Your Online Software Source - Boardwatch	Thomas Nelson/Clockwork Software	San Jose, CA
Micro Message Service	(919)779-6674	USA Today/Boxoffice Magazine - Large Download Area	Mike Stroud	Raleigh, NC
Microrim Technical Support BBS	(206)649-9836	Support for Popular R:Base Relational Data Base System	Microrim Corporation	Redmond, WA
Microsoft Download BBS	(206)936-6735	Windows Technical Notes and Support Information	Microsoft Corp/Scott J. Honaker	Bellevue, WA
Microsystems Software Inc.	(508)875-8009	HandiWare Software for Handicapped - CodeRunner C Utilities	MSI - Reed Lewis	Framingham, MA
MindVox	(212)989-4141	Internet Access, E-Mail, Newsgroups, ftp/telnet	Phantom Access Technologies	New York, NY
Minnesota Space Frontier	(612)459-0892	Minnesota Space Frontier Society - NASA News	Ben Husset	Minneapolis, MN
MOG-UR'S EMS, The	(818)366-1238	5 Lines - 8 Networks CD-ROMS - 2.8 GB Hub Services HST/V.32	Tom Tcimpidis	Granada Hills, CA
Monterey Gaming System	(408)655-5555	A Custom Multi-user BBS with Conferencing and Custom Games	David Janakes	Monterey, CA
Mountain Air BBS	(703)427-0226	Adult Based BBS	Edward Lee Wood, Jr.	Roanoke, VA
Movie BBS	(718)939-5462	Movie Reviews and Information - Television	Clarke Ulmer	New York, NY
Mustang Software	(805)873-2400	Support for Mustang Software Products	MSI Sysop	Bakersfield, CA
N.A.C.D. BBS	(912)246-3280	Cave Scuba Diving - Superb Special Topic System	National Assoc. of Cave Divers	Gainsville, FL
N8EMR Ham BBS	(614)895-2553	login:hbbs HAM Radio/AMSAT Unix System - Satellite/Packet	Gary Sanders	Westerville, OH
Namu BBS	(913)273-1550	Amateur Radio Interests	Rob Nall	Topeka, KS
NAPLPS Graphics BBS	(613)727-5272	NAPLPS Graphics Terminal and Editor Software	MicroStar Corp.	Nepean, ONTARIO
NASA Spacelink	(205)895-0028	NASA Educational Affairs Div. - Flight Data/Space History	Marshall Space Flight Center	Huntsville, AL
Nashville Exchange	(615)383-0727	12 line TBBS - Games/TDBS Software Development 1.8 GB	Ben Cunningham	Nashville, TN
National Genealogical BBS	(703)528-2612	Family History - Genealogical Research - Gravestone Haunting	National Genealogical Society	Arlington, VA
Netcom Internet Guest System	(408)241-9760	Internet Access System - type "guest" at login for info.	Netcom Online Communications Services	San Jose, CA
Network World Bulletin Board	(508)620-1178	LAN and WAN Issues and Technology	Network World Magazine	Framingham, MA
Newbed	(506)453-2147	Educational System K12 Net	William Brydges	Fredeericton, NB
Newtown Express BBS	(215)943-6806	14.5 Gigs/700+Sigs 18 Lines Large Adult Section USA Today	Anthony Maglietta	Newton, PA
Night Shift, The	(818)955-5155	16 lines/chat/Usenet Newsgroups/Internet Mail/USATODAY	Charles Hilt	Burbank, CA
NIST ACTS	(303)494-4775	Automated Computer Telephone Service - Sync PC to NBS Time	Nat. Institute for Standards/Technology	Boulder, CO
NOAA Space Environment Lab	(303)497-5042	Solar Flare/Geomagnetic Data Online	National Oceanographic/Atmospheric Admin	Boulder, CO
NoGate Consulting	(616)530-3392	Home of PAK archive utility	Mike Neuhaus Gus Smedstad	Grand Rapids, MI
North Castle BBS	(507)281-8292	Minnesotas #1 RPG BBS	Rob Richter	Rochester, MN
O&E Online	(313)591-0903	Free Community BBS, Editorial Text from Newspapers	Greg Day	Livonia, MI
OAQPSTTN	(919)541-5742	Air Quality Planning and Standards Technology Transfer Net	Environmental Protection Agency	Research Triangle Park, NC
OASIS BBS	(404)627-2662	Home of Atlanta Bulletin Board List - ABBL	Robert Orr/Online Atlanta Society	Decatur, GA
Occupational Health/Safety BBS	(212)385-2034	Job Safety Issues for Artists, Musicians, Entertainers	Mike McCann/Center for Safety in Arts	New York, NY
ODYSSEY	(818)358-6968	Largest Adult Based Entertainment Service In North America	Michael Allen	Monrovia, CA
Odyssey	(818)358-6968	Adult Multiline Chat System - Games - Magazines - Downloads	Michael Allen	Monrovia, CA
OERI BBS	(800)222-4922	Educational Statistics and Data - Performance Stats -	US Department of Education	Washington, D.C.
Old Colorado City Communications	(719)632-4111	Political Discussions - Unix UUCP Public Access - Multiline	Dave Hughes	Colorado Springs, CO
Online Now	(807)345-5522	Canada's shareware house is online now	Gary Walsh/Tom Haavisto	Thunder Bay, ONTARIO
Online With Hayes	(404)446-6336	Hayes Public Bulletin Board - Conferences/SIGS/Support	Hayes Microcomputer Products	Norcross, GA
Oracle PC	6108 260-6222	South Australian TBBS Multiline System	Don Crago	Pooraka South Australia,
Oracomm Support BBS	(612)894-5879	Sales and Support for Oracomm Multiline BBS Software	Surf Computer Services	Minneapolis, MN
Osprey's Nest	(301)989-9036	Birdwatching, Bird feeding, Naturalist/Ecology Issues	Fran and Norm Saunders	Colesville, MD
Ozone Hole, The	(504)891-3142	Boardwatch-USA Today-Internet-Usenet-RIME	Mike Mathews	New Orleans, LA

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BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARDS AND ONLINE INFORMATION SERVICES - November 1994

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
P.D.S.L.O. BBS	(516)938-6722	Home of THE LIST National BBS List	James Toro	Hicksville, NY
PacComm BBS	(813)874-3078	Packet Radio Equipment Supplier - TNC/PSK Modems	Gwyn Reedy/PacCom Inc.	Tampa, FL
Pacific Rim BBS	(619)278-7361	Message areas, Techincal Support	Brenda Donovan, Paul Adams	San Diego, CA
PC Junction BBS	(615)478-2890	Smartnet Throbnet 100,000 Files & Online Magazines	Douglas Carpenter	Cleveland, TN
PC-Ohio	(216)381-3320	Shareware library with 100% USR HST access - 50 lines	Norm Henke	Cleveland, OH
Pennywise	(800)752-3012	Online Office Supply Sales Service	Pennywise	Edmonston, MD
PHYSICS Forum BBS	(413)545-1959	Physics and Astronomical Sciences	Univ.of Mass. Dept. of Physics/Astronomy	Amherst, MA
Pinecliffe BBS 104/28	(303)642-7463	Large Shareware Library/Echomail Conferences since 1985	Craig Baker	Pinecliffe, CO
Pinnacle Software BBS	(514)345-8654	Support for Sapphire BBS Software	Timothy Campbell/Pinnacle Software	Montreal, QUEBEC
Pipeline, The	(209)592-9861	Construction topics for contractors, suppliers, public works	Michael W. Adams	Fresno, CA
PKWare BBS	(414)354-8670	Home of PKZIP 1.10 Compression Utility	Phil Katz/PKWare Incorporated	Glendale, WI
Pleasure Dome	(804)490-5878	Sexually Explicit Fantasy Chat System - Adults only	Tom Terrific	Tidewater, VA
Practical Peripherals BBS	(805)496-4445	Support BBS for Practical Peripherals Modems	Practical Peripherals	West Lake Village, CA
ProComm Support BBS	(314)875-0503	Home of ProComm 2.4.3 and ProComm Plus Comm Prgrms	Thomas Smith/DataStorm Technologies Inc.	Columbia, MO
Promised Land, The	(715)387-1339	16-Line/2.5GB/11,000+ Files/ WINDOWS, Chat & More	Tim Brown/Computer Solutions	Marshfield, WI
Public Brand Software BBS	(317)856-2087	Commercial Shareware Vendor	Public Brand Software	Indianapolis, IN
Public Connection	(817)738-7336	Public Files	Joe Coles	Ft Worth, TX
QMail Deluxe Support BBS	(615)230-8822	Support for QMail Deluxe and 1stReader offline mail utils	Mark (Sparky) Herring	Germantown, TN
Qualitas, Inc. BBS	(301)907-8030	386MAX and BlueMAX Memory Management Software Support	Qualitas Inc.	Bethesda, MD
Quarterdeck BBS	(310)314-3227	Technical Support for QEMM, DESQview, all Quarterdeck Prods	Quarterdeck Office Systems	Santa Monica, CA
QuickBBS Support BBS 363/34	(407)896-0494	Product Support for QuickBBS Software	Richard Creighton/Steve Gabrilowitz	Orlando, FL
Random Access Information Svc.	(503)695-3250	11,000 GIF Images - 20,000 DOS/Windows Shareware Files	Janice Stevens	Corbett, OR
RoboBOARD/FX	(819)682-7771	RoboBOARD Support 8 Lines	Hamilton TeleGraphics Inc.	Aylmer, PQ
Ronin BBS	(214)938-2840	Traditional File and Message BBS	Chuck Mattern	Red Oak, TX
Rose Media	(416)733-2780	19 GB - Home of Rosemail - Publications/Conferences	Vic Kass	Willowdale, ONTARIO
Rusty & Edies	(216)726-0737	Large ML PCBoard run by Husband and Wife - NFL/Tradewars	Rusty and Edwina Hardenburgh	Boardman, OH
Sahara Club BBS	(818)893-1899	Land-Use issues, Off-Road, Timber, Conservation	Patrick Martin/Sahara Club	North Hills, CA
Salt Air BBS	(801)261-8976	Home of PCBoard BBS Software - National List of PCB Sys	Clark Development Company/David Terry	Murray, UT
San Diego NeXT User's Group BBS	(619)456-2522	Support for NeXT Computers	Brian Dear/San Diego NeXT User's Group	San Diego, CA
SBA Online	(800)697-4636	Advice for Small Business Owners on Financing/Management	Small Business Administration	Washington, DC
Science Resource Studies BBS	(202)634-1764	Federal R&D Budget - Technical Labor Market Statistics	National Science Foundation	Washington, D.C.
SDN Project, The 1:141/840	(203)634-0370	The Original Software Distribution Network	Ray Kaliss	Meriden, CT
SEAboard!	(804)442-6047	Support system for ARC, SEADOG, and AXE software.	System Enhancement Associates	Nassawadox, VA
Seagate Technical Support BBS	(408)438-8771	Installation and Specifications for Hard Drive Models	Seagate/Bill Rudok	Scotts Valley, CA
Searchlight BBS	(216)631-9285	Support system for Searchlight BBS Software	Searchlight Software	Cleveland, OH
SemWare Support BBS	(404)641-8968	Home of QEdit - A Superb Shareware Text Editor	Sammy Mitchell/SemWare Software Products	Marietta, GA
SENDIT	(701)237-3283	North Dakota K-12 Educational Net-telnet sendit.nodak.edu	Gleason Sackman/NDU	Fargo, ND
SIGCAT BBS	(703)648-4168	CD-ROM /Optical Publishing Info - Lists of Gov. CD Data	SIG on CD-ROM Applications and Technol.	Gathersburg, MD
Sistema Profesional Informacion	(525)590-5988	Largest BBS in Mexico - Spanish Language TBBS	Tecnologia Uno Cero S.A. de C.V.	Mexico City,
Skeleton Closet, The	(804)671-8547	Geneology Programs File Distribution Net 1:271/23	Debbi McKay	Virginia Beach, VA
Society for Technical Comm. BBS	(703)522-3299	STC Job Service, Freelance Registry - Technical Writers	Society for Technical Communication	Washington, D.C.
Software Creations BBS	(508)368-4137	Home of Apogee Software/Commander Keen Series	Dan Linton	Clinton, MA
Sound Advice BBS	(816)436-4516	Twenty Line PCBoard with 2 Gigabytes Storage - HST Modems	Roy Timberman	Gladstone, MO
Source for Source, The	(516)968-7824	Source code - large LINUX file collection	Erik VanRiper	Bay Shore, NY
Space BBS	(415)323-4193	Multi Node BBS for Engineers	Owen Hawkins	Menlo Park, CA
Spark*Net	(718)447-5544	Internet E-Mail, Worldlink, Chat, Games,Forums, Files	John Spark	New York City, NY
Spectrum Online Systems	(719)576-6853	Graphics Based Service, Full Internet Access	Chris Phillips	Colorado Springs, CO
Star Tech BBS	(714)257-1175	LA/Orange local acess Fidonet hub, file echos, and internet	David Unfried	Orange County, CA
Star-Link Network BBS	(718)972-6099	9-nodes, 2.1GB, Ilink, 75,000 programs	Michael Keylin	Brooklyn, NY
Starlink BBS	(915)235-4818	Technical Support for Predictive Maint Customers	John Land	Sweetwater, TX
StarLink Information Services	(502)964-7827	Online Travel Service, Internet Movie Reviews & Weather	Scott Goldbach	Louisville, KY

State and Local Emergency Mgmt.	(202)646-2887	Hazardous Materials/National Dam Watch/Emergency Info	Federal Emergency Management Agency	Washington, D.C.
Streame	(718)349-8137	Connecton to the World of New York Book Publishing	BookStreame	Brooklyn, NY
STSC BBS	(801)774-6509	Software Engineering, Government & Software Organizations	George A. Klipper	Hill AFB, UT
Sun Valley Net	(208)726-1435	Information & Files on environment & outdoors	Stephen Schowengert	Ketchum, ID
Superdemocracy Foundation BBS	(305)370-9376	Online Democracy/Political Culture for the Future	Tim Stryker	Davie, FL
T-80 BBS	(403)246-4487	3.6 Gigs, 4 CD Roms 7,000 GIFS 20,000 Shareware Programs	Brian Simpson	Calgary, AB
TAXACOM	(716)896-7581	Botany, Herbaria, FLORA ONLINE Newsletter, Latin Translation	Clinton Herbarium, Buffalo Museum	Buffalo, NY
TEAMate Unix Bulletin Board	(310)318-5302	Demo/Support for TEAMate BBS Software for Unix	Bob Baskerville/MMB Development Corp.	Manhattan Beach, CA
Telebit Support BBS	(408)745-3229	Support for Telebit Modems	Telebit Corp.	Sunnyvale, CA
Telegodzilla	(503)621-3746	Home of ZModem File Transfer Protocol/YModem/YAM	Chuck Forsberg/Omen Technology Incorp.	Portland, OR
Telepath	(415)358-8641	DBMS/Dr. Dobbs Journal Magazine Online Service	M&T Publishing	Redwood City, CA
Telix Support BBS	(919)481-9399	Support Service for Telix Communications Software	Jeff Woods/deltaComm Development	Cary, NC
The Back Room	(718)849-1614	America's Largest Exclusively Gay DB - Home of Gaycomm	Fred Kohn	Richmond Hill, NY
The Chef BBS	(810)765-2966	Recipes, cooking tips, visiting chefs of the month	Terry Dawe	Marine City, MI
The Chef! BBS	(810)765-2966	Online recipes and more	Terry Dawe	Marine City, MI
The Club House BBS	(908)272-2073	ADA, OSHA, RTN, 18 CD Roms Online & 30+ Games	George Porcella	Cranford, NJ
The Eastside BBS	(407)337-1274	Family Oriented BBS Files, Conferences and Online Games	David Lane	Port St Lucie, FL
The Electronic Grapevine	(707)257-2338	Local Online Message and Info Provider, Rime Node	Dick Wolff	Wapa, CA
The File Bank	(303)534-4646	16 Line File Library - Radio Comm/Astronomy - USA Today	Girard Westerberg/Brian Bartee	Littleton, CO
The Hot Heart of Tennessee	(615)890-8715	Home of hot programs, supports PC, Amiga	Larry Reeves	Murfreesboro, TN
The INDEX System	(404)924-8472	Excellent list of Atlanta BBS systems online	Rodney Aloia	Atlanta, GA
The Ledge PCBoard	(818)896-4015	Home of Textview Door for PCBoard Systems	Joseph Sheppard	Tujunga, CA
The Liberty BBS	(714)996-7777	Nation wide Chat, E-Mail, Forums, games, CD-Roms,Online News	John Galt	Anaheim Hills, CA
The New Professional Network BBS	(413)549-8136	Hundreds of software and is job openings nationwide, FREE	ADA, National Tech. Search/Eric Davis	Amherst, MA
The Opowd Crowd	(708)885-8865	Specializing in outdoor activities and sports	KW Wroblewski	Hoffman Estates, IL
The Other BBS 1:1/0	(717)657-2223	Fidonet Zone Coordinator for North America 1:1/0	George Peace	Harrisburg, PA
The Well	(415)332-6106	Unix Conferencing System - $15 monthly plus $2 Hourly	Whole Earth Lectronic Link	Sausalito, CA
Thunderbolt BBS	(703)373-9289	Various Files & Message Areas	John Schreiber	Falmouth, VA
Tiger Team Buddhist Info Network	(510)268-0102	America's Buddhist Online Service	Gary L. Ray	Berkeley, CA
Titan BBS	(904)476-1270	Adult BBS - Online Games - GIF Images	Clayton Manson	Pensacola, FL
Tool Shop BBS	(818)891-6780	Home of HS-Link and other tools for PCBoard Systems	Sam Smith	San Fernando, CA
Town Hall	(800)441-4142	Conservative Political Conference and Debate	National Review/Heritage Foundation	Washington, DC
Traders Connection	(317)359-5199	Online System for Classified Advertisements	Carson Hanrahan	Indiannapolis, IN
Trinity 1 BBS	44 392 410210	United Kingdom Distributor of Boardwatch Magazine	John Burden	Exeter Devon, U.K.
TurBoard	(404)395-6327	NAPLPS Graphics BBS System	Software@work	Chattanooga, TN
U.F.O. BBS	(408)847-7910	Out of this world file base	Phil Intravia	Gilroy, CA
U.F.O. BBS	(408)847-7910	UFO sitings, documents, GIFs..	Phil Intravia	Gilroy, CA
U.S. Robotics - Sit UBU Sit	(708)982-5092	Support for US Robotics HST 9600 bps Modems	U.S. Robotics Corporation	Skokie, IL
US Naval Observatory BBS	(202)653-1079	Time - Date - Sunrise - Sunset - Enter @TCO for Commands	US Department of Commerce	Washington, D.C.
USDOE BBS	(202)260-9950	Currently available grants and contracts for Education	U.S. Dept. of Education/George Wagner	Washington D.C.,
USGS Quick Epicenter Determin.	(303)273-8672	Earthquake Epicenter Data - Geomagnetism7E2 800-358-2663	US Geological Survey Earthquake Info Cnt	Denver, CO
USNO Time of Day for Clocks	(202)653-0351	Xmits ASCII Time String - Sync Your PC to USNO Atomic Clock	US Naval Observatory	Washington, D.C.
UT Library Online Catalog	(512)471-9420	Online Library Card Catalog Listing 3.5 million entries	University of Texas at Austin	Austin, TX
WeatherBank	(800)827-2727	Online Weather Forecasts for Any City - Download Radar Data	Steve Root/WeatherBrief Data Services	Salt Lake City, UT
Western Digital Tech Support	(714)753-1068	Hard Drive/Controller Installation and Config Data	Western Digital Corporation	Irvine, CA
Westside, The	(213)933-4050	Area's Largest/Most Active Adult System-Chat,E-mail,Games,	Dave Harrison	Los Angeles, CA
Wildcat HQ BBS 210/12	(805)873-2400	Multiline Support System for Wildcat BBS Software	MSI - Mustang Software, Inc.	Bakersfield, CA
Windsor Manor	(203)688-4973	Over 120 Online games Tabs Subscription Running VBBS	Jim Taylor	Windsor, CT
Wizard's Gate,The	(614)224-1635	Multi-Line Totally Free BBS-Multi Player Games,Files,Message	Joseph G. Balshone	Columbus, OH
Word Perfect Customer Support	(801)225-4444	Word Perfect 4.2/5.0/5.1 Support/Printer Drivers	Word Perfect Corporation	Orem, UT
World Data Network Online	(703)620-8900	Home of the Capital Hill Sysops ass. Internet, E-mail	Tony Mcclenny, Andrew Bilski	Reston, VA
Worldview BBS	(510)676-2919	Reformed Protestant Topics; Telefinder Host	Bill Gram-Reefer	Concord, CA
WWIV Support BBS	(310)208-6689	Support for WWIV BBS Software	Wayne Bell	Rolling Hills Estates, CA
XTree BBS	(805)546-9150	Support for XTree Pro Gold DOS Shell Program	XTree Company	San Luis Obispo, CA
XyQuest Support BBS	(508)667-5669	Support for XyWrite Word Processor - Custom Keyboard Files	XyQuest Inc. - Christine Madsen	Bellerica, MA
Z/Max XChange UNIX BBS	(315)635-1947	Demo/online support for XChange UNIX BBS	Z/Max Computer Solutions, Inc.	Baldwinsville, NY

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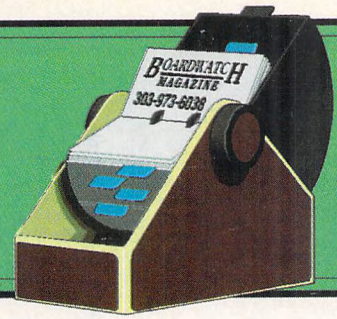

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*Picture shows complete 16 user TBBS/TDBS System.

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DVORAK ONLINE

by John C. Dvorak

FIDDLING ON THE COMPUTER WHILE ROME BURNS

In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for ***MacUser***, ***PC Computing***, ***DEC Professional***, ***Information Technology***, and his featured "Inside Track" column in ***PC Magazine***, Dvorak is the author of several best-selling books, including ***Dvorak's Inside Track to DOS & PC Performance***, ***Dvorak's Guide to PC Telecommunications***, and ***Dvorak's Inside Track to the Mac***.

When I was asked to be editor of Infoworld in 1981 the Editor-in-Chief, Maggie Canon, had a policy of routing the potential editor through the staff so they could approve the new hire. At the time the staff was loaded with a bunch of talented guys just entering the writing business and all destined for bigger things. This included John Markoff (now the NY Times top technology reporter), Paul Freiberger (book author, "Fuzzy Logic" among others), Mike Swain (later the Editor-in-Chief of Dr. Dobbs Journal). These three guys struck me as hippy wannabees at the time and were all preoccupied with social issues. So when we got together for my "interview" they grilled me about my thoughts on social issues suggesting that Infoworld should be some sort of guiding light regarding social issues and computing. This meant discussing hazardous waste instead of 8088 memory requirements. They were dumbfounded when I told them hell no, "That stuff is boring!"

John Markoff a few years ago admitted to me that all three of the guys went to Maggie and vetoed my being hired. "But it turned out that Maggie wasn't going to pay any attention to us anyway and she hired you despite our complaining." So much for employee participation. Curiously Paul Freiberger, for years, kept telling me that I got the job because they all gave the okay. "You have to thank me for getting the editor's job," he'd say. I also believed there was a pact between the three of them not to reveal the situation — at least during the period where I was supervising them.

At the time my comments that social issues are boring was valid. And the circulation of the magazine during my short 2-year tenure increased fivefold. 1981 was no time to thwart the computer revolution with theoretical social commentary or investigative reporting which would lead nowhere. I believe the aftermath of Watergate combined with the cornball Lou Grant TV show where the investigative reporter Rossi chased after all sorts of ersatz scandal had turned a lot of potential writers into mediocre crusaders. Even now we see too many know-nothings writing about technology while wishing they were busting government corruption.

People who write about computers should take some programming classes or electrical engineering or something. I don't think you have to be a genius to

understand what's going on and you don't have to be able to code DOOM in your spare time before you can critique a spreadsheet, but you have to know something!

Journalism school teaches you that if you learn how to ask the right questions you don't need expertise in anything to write about it. That's kind of a basic precept. Too bad that it is sheer nonsense. What you end up with (just look in any newspaper) are reports on subjects that are taught in school. What's taught the most? Social Studies. So all that is reported is City Hall stuff, cops and robbers exploits and civic activities. Business reporting is incredibly superficial and technology reporting quickly degenerates into golly-gee-whiz crapola when handled by know-nothings. There are maybe five guys who can report on technology with insight and understanding. It turns out that asking the right questions is not as easy as they'd like you to believe. As a cynic once said, "You've got it made in the media if you can get them to ask the wrong questions."

Having said all that, I look at the calendar and see 1995 fast approaching. Whatever computer revolution that was triggered is just about as much in place as it's ever going to be. Perhaps we should change the words "in place" with "entrenched." We are about to reap what we sowed. And like anything revolutionary there is a good side and a bad side. The good side is that computers have allowed us to do many things we could never do before. Individualists, in particular, who spotted these things early, may have been the greatest beneficiaries. Desktop publishing, increased output, online research, etc-etc, make this scene very compelling. But it's also apparent that a large segment of the work force and a big chunk of the community at large is suffering. Let's face it a lot of jobs are being lost as a direct result of computer technology. These jobs will never be replaced. If there was a bloody revolution and the government was overthrown these jobs would still not be replaced. When voice recognition technology enters the business world, another wave of layoffs will take place and still more jobs will forever disappear. "Daddy, you mean real people used to answer these questions years ago?"

Once full implementation of cash cards — credit cards with microprocessors and memory chips — becomes a reality then the picture changes even more drastically. I can imagine the day when you can drive up to Burger King:

Computer Voice: Can I take your order?

Customer: A whopper with cheese.

Computer Voice: A whopper with cheese.

Would you like fries with that?

Customer: No thanks.

Computer Voice: That will be $5.

Please insert your cash card in the slot, remove card when prompted and drive up to the window.

And please DO have a nice day.

Inside you'll see a giant machine. From it, on a small conveyor belt, comes a bag with the burger in it. There will be exactly two napkins and one vial of ketchup and one vial of mustard depending on how the Burger King research department has programmed the burger machine. The machine can make burgers, french fries, change the burger to fit the customer the way Burger King has always done it. Only now the voice recognition computer feeds the data into the burger machine. One person trained to know how to reboot the system if it fails for some odd reason works at the outlet. Otherwise there is nobody there. The burger machine runs mostly unattended and everything is computer controlled. You no longer have to worry that someone is spitting on your food in the back.

The irony to this foregone conclusion is that the pathetic entry level jobs once afforded by McDonalds and Burger King will disappear forever once the entire operation is mechanized. It could probably be done tomorrow. I expect it to be triggered someday by one too many increases in the minimum wage.

Curiously at a time when computer technology has actually run amok, there are few people who want to address the social issues. And those who do are the same know-nothings who haven't a clue about technology. They just want to complain. More importantly, the socially responsible among the clued (The Electronic Frontier Foundation among others comes to mind) are preoccupied with freedom of speech (not that I'm complaining) and government intrusion. The Computer Professionals for Social Responsibility seems like ivory tower professors and as a group, I believe, are more interested in recycling broken glass than finding a way, in the future, to compensate the poor guy who used to tend the french fry vat at Wendy's. In fact, it looks like there is no hope of saving any of these jobs that will be lost by computer technology. And, to make matters worse, there is no program — government, societal, corporate, anything — that even addresses this obvious and worsening problem. I'm personally stunned by this complete lack of response to an obvious problem.

I have to suspect that the socially-conscious out there who should be complaining are simply late getting on the computer bandwagon. As writers and critics that they find the computer so nifty they spend all their time adoring it. These Johnny Come-latelies are hopeless.

I don't have a solution to the problems we face either, but I can suggest one thing. I think we should all make ourselves more aware of the dislocation we, as computerists, are creating. I think most of us are totally ignoring it. I'm not corny enough to suggest that awareness is all that it will take to solve the problem and actually hope it may even be a problem that solves itself. I sure don't think it will, though. Luckily the computer community is a pretty smart group. I'm just hoping awareness will trigger some bright ideas. ◆

WORLD'S BEST SALSA

This is a recipe I had to pry out of the hands of Charles McHenry. PR man. It's a family recipe he got from his father-in-law, Guadalupe Munoz.

This one takes time, but is worth it.

Lupe's Salsa: a hearty, hot Mexican salsa made from a variety of chilis.

INGREDIENTS:

12 large, green Anaheim chilis
12 medium, yellow chilis (not banana chilis)
6 small, green Serrano chilis
6 small green Jalapeno chilis
2 large garden tomatoes (beefsteaks if possible), or,
4 medium, green tomatillos
1/2 cup of finely chopped green onions, tops & bottoms

NOTE on selecting chilis: choose straight & firm chilis that reflect proper coloring for their family.

INSTRUCTIONS:

CHOP onion tops and bottoms, place in medium size mixing bowl.

TOAST all chilis on a griddle (like frying without oil) over high heat, until outside skin is quite blackened, turning as necessary... While toasted chilis remain hot, wrap lightly in a thoroughly moistened, clean dishtowel for about 20 - 30 minutes. This allows the toasted chilis to "sweat", and makes removing skins easy. Boil tomatoes or tomatillos until skin cracks, rinse under cold water and remove skins. Add to mixing bowl. Skin toasted chilis, being careful to remove stems, and add to mixing bowl — including seeds. knead or mash mixture of onions, chilis and tomatoes (or tomatillos) with hands or potato masher until well blended.

CHILL until serving. This recipe yields about two pints of the most delicious salsa available...almost all chili meat.

The salsa is delicious with Carne Asada, Carnitas (as well as most meats), and, Mexican eggs at breakfast. It is also a novel appetizer.

CAVEAT: be prepared to work about 1.5 hours on this recipe and be careful to wash your hands multiple times. The salsa is hot, though not too hot. It has a unique and strong flavor and is chock full of vitamins and fiber. Altogether wonderful.

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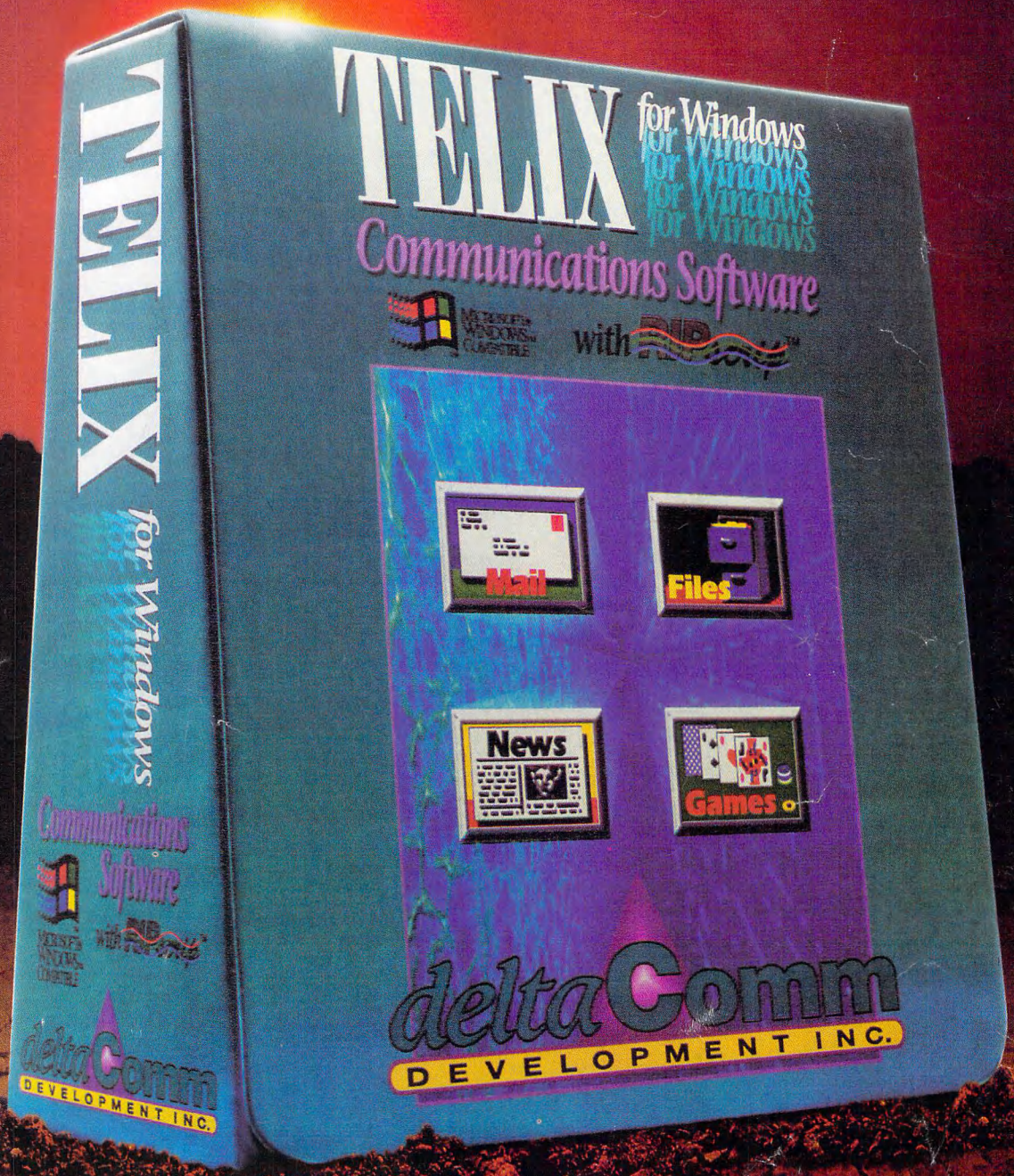

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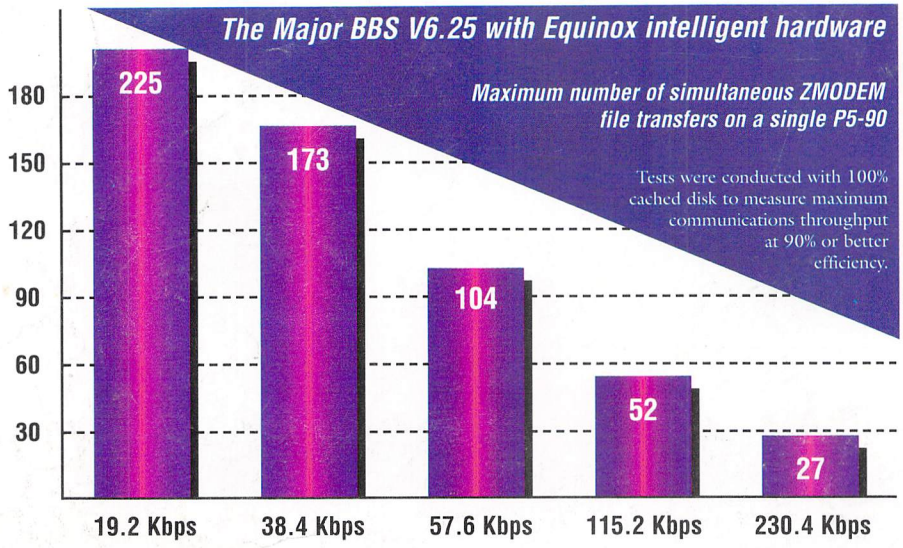

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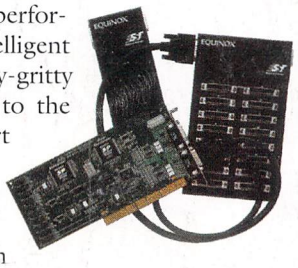

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